Ngrazier 10750466AMEND

The previous command name entered was not recognized by the system.
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"HELP COMMANDS" at an arrow prompt (=>).

=> fil reg
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 16:36:05 ON 01 NOV 2005
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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES: 31 OCT 2005 HIGHEST RN 866452-21-3
DICTIONARY FILE UPDATES: 31 OCT 2005 HIGHEST RN 866452-21-3

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TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when
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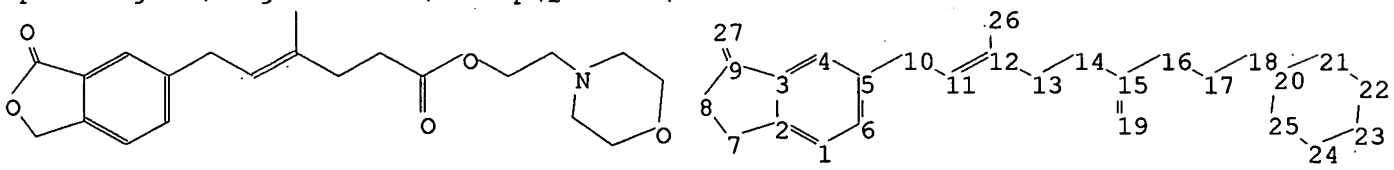
```
**********************************************************************
*                                                                    *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,    *
* effective March 20, 2005.  A new display format, IDERL, is now     *
* available and contains the CA role and document type information.  *
*                                                                    *
**********************************************************************
```

Structure search iteration limits have been increased. See HELP SLIMITS
for details.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10750466.str



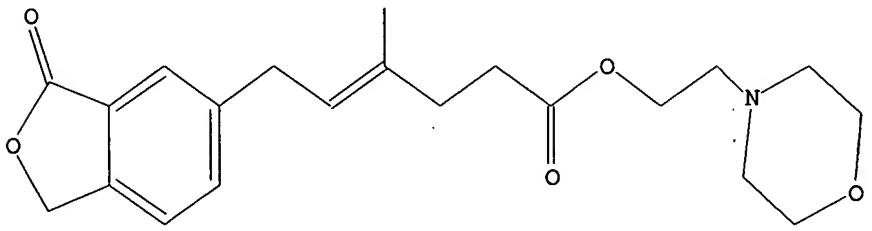
chain nodes :
10 11 12 13 14 15 16 17 18 19 26 27
ring nodes :
1 2 3 4 5 6 7 8 9 20 21 22 23 24 25

chain bonds :
5-10 9-27 10-11 11-12 12-13 12-26 13-14 14-15 15-16 15-19 16-17 17-18 18-20
ring bonds :
1-2 1-6 2-3 2-7 3-4 3-9 4-5 5-6 7-8 8-9 20-21 20-25 21-22 22-23 23-24
24-25
exact/norm bonds :
2-7 3-9 7-8 8-9 9-27 15-16 15-19 16-17 18-20 20-21 20-25 21-22 22-23 23-24
24-25
exact bonds :
5-10 10-11 11-12 12-13 12-26 13-14 14-15 17-18
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS
20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:CLASS 27:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 16:36:44 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 1 TO ITERATE

100.0% PROCESSED 1 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 1 TO 80
PROJECTED ANSWERS: 1 TO 80

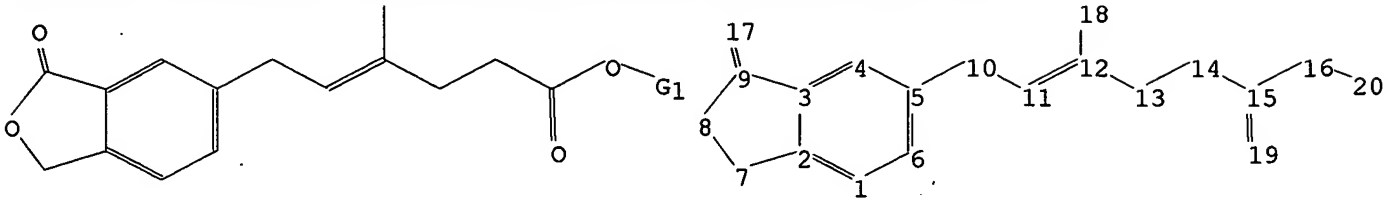
L2 1 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 16:36:48 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 46 TO ITERATE

100.0% PROCESSED 46 ITERATIONS 38 ANSWERS
SEARCH TIME: 00.00.01

L3 38 SEA SSS FUL L1

=>
Uploading C:\Program Files\Stnexp\Queries\10750466INTERMED.str



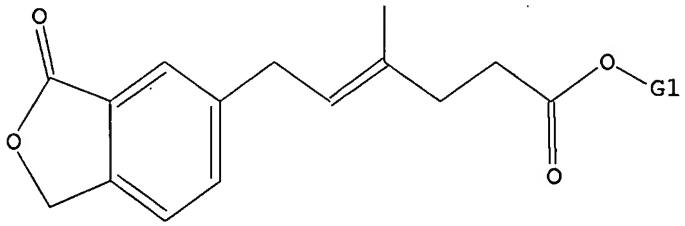
chain nodes :
10 11 12 13 14 15 16 17 18 19 20
ring nodes :
1 2 3 4 5 6 7 8 9
chain bonds :
5-10 9-17 10-11 11-12 12-13 12-18 13-14 14-15 15-16 15-19 16-20
ring bonds :
1-2 1-6 2-3 2-7 3-4 3-9 4-5 5-6 7-8 8-9
exact/norm bonds :
2-7 3-9 7-8 8-9 9-17 15-16 15-19 16-20
exact bonds :
5-10 10-11 11-12 12-13 12-18 13-14 14-15
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6

G1:CH3,Et,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS
20:CLASS

L4 STRUCTURE UPLOADED

=> d l4
L4 HAS NO ANSWERS
L4 STR



G1 Me,Et,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu

Structure attributes must be viewed using STN Express query preparation.

```
=> s l4
SAMPLE SEARCH INITIATED 16:37:20 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -       73 TO ITERATE

100.0% PROCESSED       73 ITERATIONS                                 17 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          948 TO     1972
PROJECTED ANSWERS:              93 TO      587

L5           17 SEA SSS SAM L4

=> s l4 full
FULL SEARCH INITIATED 16:37:27 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     1173 TO ITERATE

100.0% PROCESSED     1173 ITERATIONS                               274 ANSWERS
SEARCH TIME: 00.00.01

L6          274 SEA SSS FUL L4

=> fil hcaplus
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                 323.09     323.30

FILE 'HCAPLUS' ENTERED AT 16:37:51 ON 01 NOV 2005
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FILE COVERS 1907 - 1 Nov 2005  VOL 143 ISS 19
FILE LAST UPDATED: 31 Oct 2005  (20051031/ED)

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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> s l3
L7         1824 L3

=> s l6
L8           82 L6

=> s l7 and (process or make or synth? or made or making)
       2164417 PROCESS
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        218405 MAKE
       2082037 SYNTH?
       1173413 MADE
        263423 MAKING
L9         198 L7 AND (PROCESS OR MAKE OR SYNTH? OR MADE OR MAKING)

=> s l9 and catalyst
        704045 CATALYST
L10          5 L9 AND CATALYST

=> d ed abs ibib hitstr 1-5
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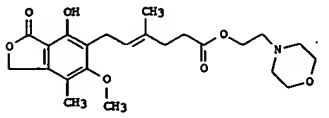
L10 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 22 Oct 2004
GI



I

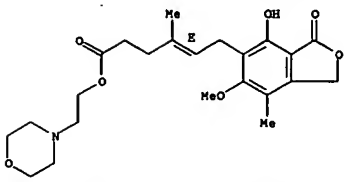
AB 4-[(2-Hydroxyethyl)morpholino] mycophenolate I is prepared by the esterification of mycophenolic acid or its salts with 4-(2-hydroxyethyl)morpholine under microwave irradiation
ACCESSION NUMBER: 2004:878397 HCAPLUS
DOCUMENT NUMBER: 141:366238
TITLE: Microwave esterification synthesis of 4-[(2-hydroxyethyl)morpholino] mycophenolate
INVENTOR(S): Adhikary, Laxmi; Suryanarayan, Shrikumar
PATENT ASSIGNEE(S): Biocon Limited, India
SOURCE: PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004089946	A1	20041021	WO 2003-IN143	20030407
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			WO 2003-IN143	20030407

OTHER SOURCE(S): CASREACT 141:366238
IT 128794-94-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(microwave esterification synthesis of 4-[(2-hydroxyethyl)morpholino] mycophenolate)
RN 128794-94-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (4E)- (9CI) (CA INDEX NAME)

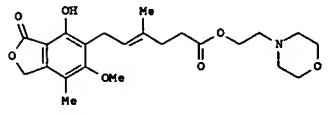
Double bond geometry as shown.

L10 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

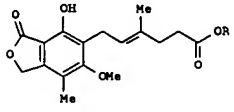


REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 27 Aug 2004
GI



I



II

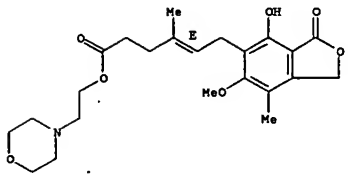
AB A process for making mycophenolate mofetil (I) comprising: conducting a catalytic transesterification by reacting a low-carbon alkyl ester of mycophenolic acid (II; R = Me, Et, Pr, Bu) with 2-morpholinoethanol [4-(2-hydroxyethyl)morpholine] to obtain a crude product of mycophenolate mofetil, which is then isolated and purified.
ACCESSION NUMBER: 2004:701805 HCAPLUS
DOCUMENT NUMBER: 141:225522
TITLE: Process for making mycophenolate mofetil by transesterification
INVENTOR(S): Lee, Kwang-chung; Lin, Shu-chuan; Chiu, Ray-hwa
PATENT ASSIGNEE(S): Taiwan
SOURCE: U.S. Pat. Appl. Publ., 3 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004167130	A1	20040826	US 2003-750466	20031229
TW 221414	B1	20041001	TW 2003-92103728	20030221
PRIORITY APPLN. INFO.:			TW 2003-92103728 A	20030221

OTHER SOURCE(S): CASREACT 141:225522; MARPAT 141:225522
IT 128794-94-5P, Mycophenolate mofetil
RL: SPN (Synthetic preparation); PREP (Preparation)
(process for preparation of mycophenolate mofetil by transesterification of mycophenolic acid esters with morpholinoethanol)
RN 128794-94-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L10 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L10 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 23 May 2003

AB The present invention relates to an improved method for synthesis of mycophenolate mofetil by reacting mycophenolic acid with an excess of 2-morpholinoethanol using an enzyme as catalyst in a water-free organic solvent and its subsequent purification The use of an anhydrous organic solvent leads to higher conversion of mycophenolic acid. Water generated in the reaction may also be removed using mol. sieves to further improve conversion of mycophenolic acid to mycophenolate mofetil.

ACCESSION NUMBER: 2003:397024 HCAPLUS
DOCUMENT NUMBER: 138:384235
TITLE: Enzymatic preparation of mycophenolate mofetil
INVENTOR(S): Patil, Nitin; Mandhe, Rakesh; Khedkar, Anand; Melarkode, Ramakrishnan; Suryanarayan, Shrikumar
PATENT ASSIGNEE(S): Biocon India Limited, India
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003042393	A1	20030522	WO 2001-IN202	20011116

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

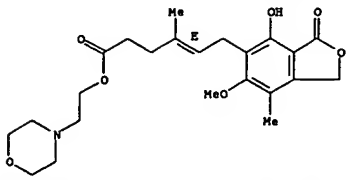
PRIORITY APPLN. INFO.: WO 2001-IN202 20011116
OTHER SOURCE(S): CASREACT 138:384235

IT 128794-94-5P, Mycophenolate mofetil
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(enzymic preparation of mycophenolate mofetil)

RN 128794-94-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L10 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 16 Jun 2000

AB Methods for the manufacture of mycophenolate are disclosed. Mycophenolate mofetil is biochem. synthesized using mycophenolic acid and 2-morpholinoethanol with the help of an enzyme. Mycophenolate mofetil is also chemical synthesized non-catalytically by refluxing mycophenolic acid with 2-morpholinoethanol in the absence of a third solvent or a catalyst.

ACCESSION NUMBER: 2000:402025 HCAPLUS
DOCUMENT NUMBER: 133:29685
TITLE: Methods of producing esters of mycophenolate
INVENTOR(S): Sircar, Anindya; Khedkar, Anand; Kulkarni, Madhav; Suryanarayan, Shrikumar; Sridharan, Madhavan; Acharaya, Poorpanapranja; Samvasivam, Ganesh
PATENT ASSIGNEE(S): Biocon India Limited, India
SOURCE: PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000034503	A2	20000615	WO 1999-IN70	19991209
WO 2000034503	A3	20000817		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

IN 188985	A	20021130	IN 1998-MA2754	19981209
CA 2354554	AA	20000615	CA 1999-2354554	19991209
EP 1137795	A2	20011004	EP 1999-964770	19991209

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

US 6709846	B1	20040323	US 2001-857579	20010607

PRIORITY APPLN. INFO.: IN 1998-MA2754 A 19981209
WO 1999-IN70 W 19991209

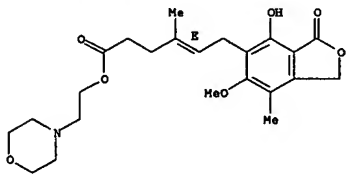
OTHER SOURCE(S): CASREACT 133:29685

IT 128794-94-5P, Mycophenolate mofetil
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(producing esters of mycophenolate)

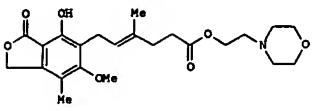
RN 128794-94-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L10 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L10 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 08 Jan 1994
GI



I

AB A process for the esterification of mycophenolic acid with 2-morpholinoethanol in an inert organic solvent (e.g., toluene/xylene) capable of azeotropic removal of water gave product, the immunosuppressive drug mycophenolate mofetil (I). Yields were 78-83%. Inclusion of an acid or base catalyst in the reaction gave no increase in either completion or yield, and is thus unnecessary. Addnl. solvents are benzene, mineral spirits, and CH2Cl2.

ACCESSION NUMBER: 1994:8601 HCAPLUS
DOCUMENT NUMBER: 120:8601
TITLE: Direct esterification of mycophenolic acid
INVENTOR(S): Knox, Martin; Donegan, Gregory; Smith, Dennis A.
PATENT ASSIGNEE(S): Syntex (U.S.A.), Inc., USA
SOURCE: U.S., 6 pp. Cont.-in-part of U.S. Ser. No. 911,635, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5247083	A	19930921	US 1992-993146	19921218
WO 9401427	A1	19940120	WO 1993-US6390	19930709
W: JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 649422	A1	19950426	EP 1993-917003	19930709
EP 649422	B1	19970319		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08500340	T2	19961116	JP 1994-503484	19930709
JP 3199741	B2	20010820		
AT 150460	E	19970415	AT 1993-917003	19930709
ES 2098763	T3	19970501	ES 1993-917003	19930709

PRIORITY APPLN. INFO.: US 1992-911635 B2 19920710
US 1992-993146 A 19921218
WO 1993-US6390 W 19930709

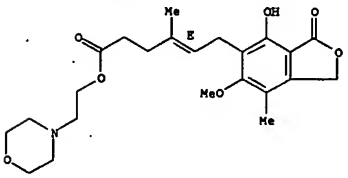
OTHER SOURCE(S): CASREACT 120:8601

IT **128794-94-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by direct esterification)

RN 128794-94-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-

L10 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



Ngrazier 10750466AMEND

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L3            38 S L1 FULL
L4               STRUCTURE UPLOADED
L5            17 S L4
L6           274 S L4 FULL

     FILE 'HCAPLUS' ENTERED AT 16:37:51 ON 01 NOV 2005
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L8            82 S L6
L9           198 S L7 AND (PROCESS OR MAKE OR SYNTH? OR MADE OR MAKING)
L10            5 S L9 AND CATALYST

=> s l7 and transester?
         20667 TRANSESTER?
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=> d ed abs ibib hitstr
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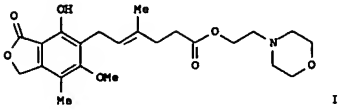
L11 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 27 Aug 2004
GI



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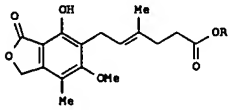


II

AB A process for making mycophenolate mofetil (I) comprising: conducting a catalytic transesterification by reacting a low-carbon alkyl ester of mycophenolic acid (II; R = Me, Et, Pr, Bu) with 2-morpholinoethanol [4-(2-hydroxyethyl)morpholine] to obtain a crude product of mycophenolate mofetil, which is then isolated and purified.

ACCESSION NUMBER: 2004:701805 HCAPLUS
DOCUMENT NUMBER: 141:225522
TITLE: Process for making mycophenolate mofetil by transesterification
INVENTOR(S): Lee, Kwang-chung; Lin, Shu-chuan; Chiu, Ray-hwa
PATENT ASSIGNEE(S): Taiwan
SOURCE: U.S. Pat. Appl. Publ., 3 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

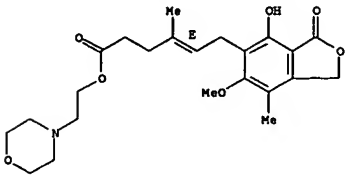
PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004167130	A1	20040826	US 2003-750466		20031229
TW 221414	B1	20041001	TW 2003-92103728		20030221
PRIORITY APPLN. INFO.:			TW 2003-92103728	A	20030221

OTHER SOURCE(S): CASREACT 141:225522; MARPAT 141:225522

IT 128794-94-5P, Mycophenolate mofetil
RL: SPN (Synthetic preparation); PREP (Preparation)
(process for preparation of mycophenolate mofetil by transesterification of mycophenolic acid esters with morpholinoethanol)
RN 128794-94-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (4E)- (9CI) (CA

L11 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
INDEX NAME)

Double bond geometry as shown.



Ngrazier 10750466AMEND

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=> d his

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     FILE 'REGISTRY' ENTERED AT 16:36:05 ON 01 NOV 2005
L1              STRUCTURE UPLOADED
L2            1 S L1
L3           38 S L1 FULL
L4              STRUCTURE UPLOADED
L5           17 S L4
L6          274 S L4 FULL

     FILE 'HCAPLUS' ENTERED AT 16:37:51 ON 01 NOV 2005
L7         1824 S L3
L8           82 S L6
L9          198 S L7 AND (PROCESS OR MAKE OR SYNTH? OR MADE OR MAKING)
L10           5 S L9 AND CATALYST
L11           1 S L7 AND TRANSESTER?

=> s l8 and l7
L12           9 L8 AND L7

=> d ed abs ibib hitstr 1-9
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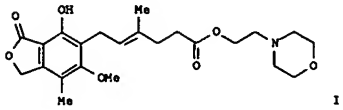
L12 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 27 Aug 2004
GI



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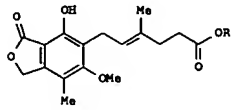


II

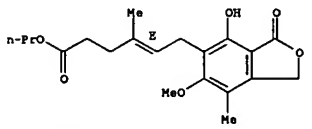
AB A process for making mycophenolate mofetil (I) comprising: conducting a catalytic transesterification by reacting a low-carbon alkyl ester of mycophenolic acid (II; R = Me, Et, Pr, Bu) with 2-morpholinoethanol [4-(2-hydroxyethyl)morpholine] to obtain a crude product of mycophenolate mofetil, which is then isolated and purified.

ACCESSION NUMBER: 2004:701805 HCAPLUS
DOCUMENT NUMBER: 141:225522
TITLE: Process for making mycophenolate mofetil by transesterification
INVENTOR(S): Lee, Kwang-chung; Lin, Shu-chuan; Chiu, Ray-hwa
PATENT ASSIGNEE(S): Taiwan
SOURCE: U.S. Pat. Appl. Publ., 3 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004167130	A1	20040826	US 2003-750466	20031229
TW 221414	B1	20041001	TW 2003-92103728	20030221
PRIORITY APPLN. INFO.:			TW 2003-92103728 A	20030221

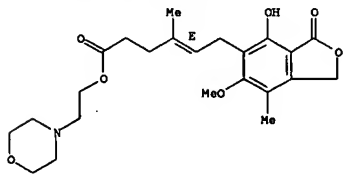
OTHER SOURCE(S): CASREACT 141:225522; MARPAT 141:225522
IT 31858-66-9, Methyl mycophenolate 32483-51-5, Ethyl mycophenolate 40336-78-5 745067-13-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for preparation of mycophenolate mofetil by transesterification of mycophenolic acid esters with morpholinoethanol)
RN 31858-66-9 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (4E)- (9CI) (CA INDEX NAME)

L12 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



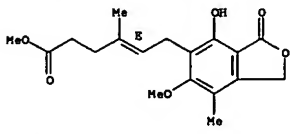
IT 128794-94-5P, Mycophenolate mofetil
RL: SPN (Synthetic preparation); PREP (Preparation)
(process for preparation of mycophenolate mofetil by transesterification of mycophenolic acid esters with morpholinoethanol)
RN 128794-94-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



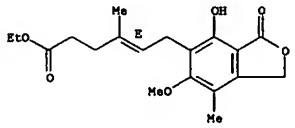
L12 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Double bond geometry as shown.



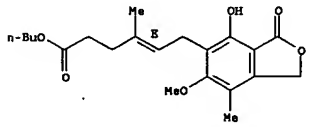
RN 32483-51-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, ethyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 40336-78-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, butyl ester, (4E)- (9CI) (CA INDEX NAME)

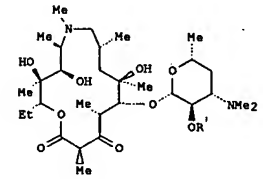
Double bond geometry as shown.



RN 745067-13-4 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, propyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L12 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 29 Aug 2003
GI



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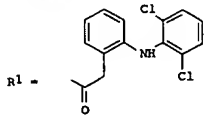

AB Erythromycin macrolide conjugates T-(L-C)m, wherein T is a transportophore, L is a bond or a linker having a mol. weight up to 240 dalton, C is a non-antibiotic therapeutic agent, and m is 1-8, in which the transportophore has an immune selectivity ratio of at least 2, the transportophore is covalently bonded to the non-antibiotic therapeutic agent via the bond or the linker, and the compound has an immune selectivity ratio of at least 2, useful for enhancing efficacy of a therapeutic agent. Thus, macrolide I (R = R1) was prepared in 76% yield via coupling of I (R = H) with diclofenac as antitumor and antibacterial agent and was tested in vitro for its cytotoxicity and immunosuppressive activity using a mouse skin transplant model.

ACCESSION NUMBER: 2003:678606 HCAPLUS
DOCUMENT NUMBER: 139:197709
TITLE: macrolide erythromycin conjugates of biologically active compounds, methods for their preparation and use, formulation, and pharmaceutical applications thereof
INVENTOR(S): Burnet, Michael; Guse, Jan-Hinrich; Gutke, Hans-Jurgen; Beck, Albert; Tsotsou, Georgia; Droste-Borel, Irina; Reichert, Jeannette; Luyten, Kattie; Busch, Maximilian; Wolff, Michael; Khobzaoui, Moussa; Margutti, Simona; Meindl, Thomas; Kim, Gene; Barker, Laurence
PATENT ASSIGNEE(S): Sympore G.m.b.H., Germany
SOURCE: PCT Int. Appl., 183 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

L12 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

WO 2003070174		A2	20030828	WO 2003-US4609	20030214
WO 2003070174		A3	20031113		
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	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2476423		AA	20030828	CA 2003-2476423	20030214
EP 1483277		A2	20041208	EP 2003-716044	20030214
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US 2005171342		A1	20050804	US 2003-504787	20030214
PRIORITY APPLN. INFO.:				US 2002-357434P P	20020215
				WO 2003-US4609 W	20030214

OTHER SOURCE(S): MARPAT 139:197709

IT 586411-53-2P 586411-78-1P
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(macrolide erythromycin conjugates of biol. active compds. methods for their preparation and use formulation and pharmaceutical applications thereof)

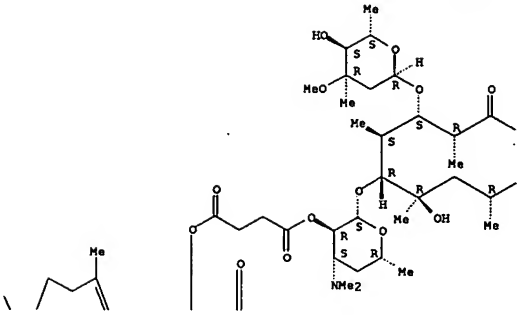
RN 586411-53-2 HCAPLUS

CN 1-Oxa-6-azacyclopentadecan-15-one, 13-[(2,6-dideoxy-3-C-methyl-3-O-methyl-α-L-ribo-hexopyranosyl)oxy]-2-ethyl-3,4,10-trihydroxy-3,5,6,8,10,12,14-heptamethyl-11-[[3,4,6-trideoxy-3-(dimethylamino)-2-O-[4-[[5-[(2E)-6-ethoxy-3-methyl-6-oxo-2-hexenyl]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-isobenzofuranyl]oxy]-1,4-dioxobutyl]-β-D-xylo-hexopyranosyl]oxy]-, (2R,3S,4R,5R,8R,10R,11R,12S,13S,14R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

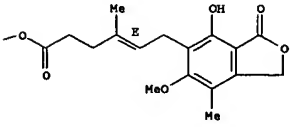
L12 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-A



L12 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-B

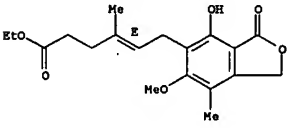


IT 32483-51-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(macrolide erythromycin conjugates of biol. active compds. methods for their preparation and use formulation and pharmaceutical applications thereof)

RN 32483-51-5 HCAPLUS

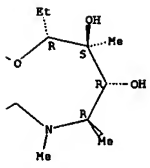
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, ethyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

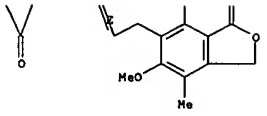


L12 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-C



PAGE 2-B

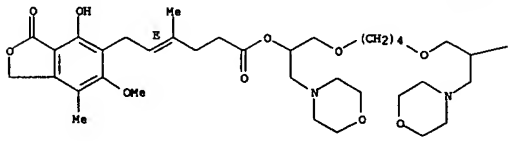


RN 586411-78-1 HCAPLUS

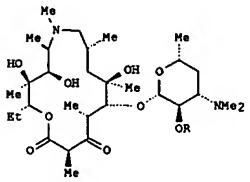
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 1,4-butanediylbis[oxy[1-(4-morpholinylmethyl)-2,1-ethanediyl]] ester, (4E,4'E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



L12 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 29 Aug 2003
GI



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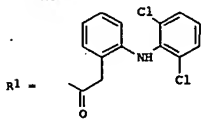

AB Erythromycin macrolide conjugates T-(L-C)m, wherein T is a transportophore, L is a bond or a linker having a mol. weight up to 240 dalton, C is a non-antibiotic therapeutic agent, and m is 1-8, in which the transportophore has an immune selectivity ratio of at least 2, the transportophore is covalently bonded to the non-antibiotic therapeutic agent via the bond or the linker, and the compound has an immune selectivity ratio of at least 2, useful for enhancing efficacy of a therapeutic agent. Thus, macrolide I (R = R1) was prepared in 76% yield via coupling of I (R = H) with diclofenac as antitumor and antibacterial agent and was tested in vitro for its cytotoxicity and immunosuppressive activity using a mouse skin transplant model.

ACCESSION NUMBER: 2003:678605 HCAPLUS
DOCUMENT NUMBER: 139:197708
TITLE: macrolide erythromycin conjugates of biologically active compounds, methods for their preparation and use, formulation, and pharmaceutical applications thereof
INVENTOR(S): Burnet, Michael; Guse, Jan-Hinrich; Kim, Gene; Beck, Albert; Tsotsou, Georgia; Droste-Borel, Irina; Barker, Laurence; Wolff, Michael; Gutke, Hans-Jurgen
PATENT ASSIGNEE(S): Sympore G.m.b.H., Germany
SOURCE: PCT Int. Appl., 164 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

L12 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2004005641	A1	20040108	US 2003-367624	20030214
EP 1483579	A2	20041208	EP 2003-711061	20030214
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PRIORITY APPLN. INFO.:			US 2002-357589P	P 20020215
			WO 2003-US4596	W 20030214

OTHER SOURCE(S): MARPAT 139:197708

IT 586411-53-2P 586411-78-1P
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(macrolide erythromycin conjugates of biol. active compds. methods for their preparation and use formulation and pharmaceutical applications thereof)

RN 586411-53-2 HCAPLUS
CN 1-Oxa-6-azacyclopentadecan-15-one, 13-[(2,6-dideoxy-3-C-methyl-3-O-methyl-α-L-ribo-hexopyranosyl)oxy]-2-ethyl-3,4,10-trihydroxy-3,5,6,8,10,12,14-heptamethyl-11-[[3,4,6-trideoxy-3-(dimethylamino)-2-O-[4-[[5-[(2E)-6-ethoxy-3-methyl-6-oxo-2-hexenyl]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-isobenzofuranyl]oxy]-1,4-dioxobutyl]-β-D-xylo-hexopyranosyl]oxy]-, (2R,3S,4R,5R,8R,10R,11R,12S,13S,14R)- (9CI) (CA INDEX NAME)

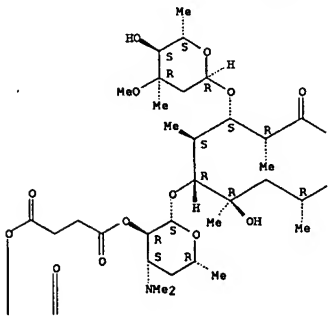
Absolute stereochemistry.
Double bond geometry as shown.

L12 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-A

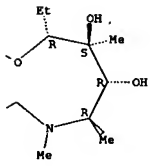
EtO

PAGE 1-B

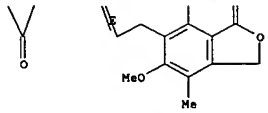


L12 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-C



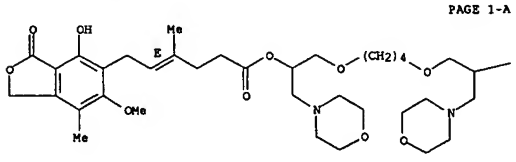
PAGE 2-B



RN 586411-78-1 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 1,4-butanediylbis[oxy[1-(4-morpholinylmethyl)-2,1-ethanediyl]] ester, (4E,4'E)- (9CI) (CA INDEX NAME)

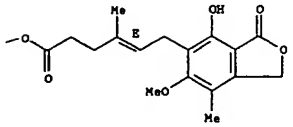
Double bond geometry as shown.

PAGE 1-A



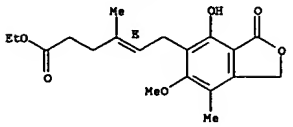
L12 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-B



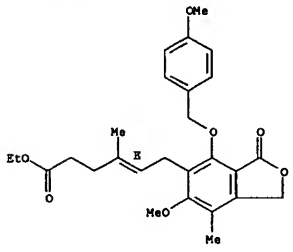
IT 32483-51-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(macrolide erythromycin conjugates of biol. active compds. methods for their preparation and use formulation and pharmaceutical applications thereof)
RN 32483-51-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, ethyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



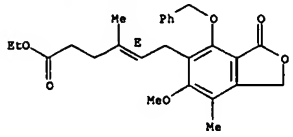
L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
188712-01-8P 188712-03-0P
RL: ADV (Adverse effect, including toxicity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of mycophenolic acid derivs. as immunosuppressants)
RN 188711-39-9 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-4-[(4-methoxyphenyl)methoxy]-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 188711-40-2 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-(phenylmethoxy)-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

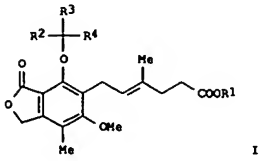
Double bond geometry as shown.



RN 188711-41-3 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[(4-chlorophenyl)methoxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 01 May 1997
GI



I

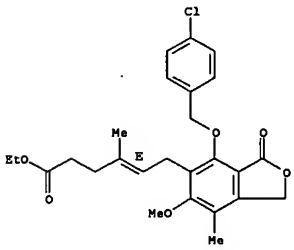
AB Title compds. I [R1 = H, alkyl; R2, R3 = H, Me, etc.; R4 = (un)substituted alkyl, (un)substituted alkenyl, (un)substituted alkynyl, (un)substituted Ph, (un)substituted heterocyclyl, alkoxy, (un)substituted phenoxy, etc.] are prepared and their absorption and toxicity were studied. Thus, stirring a mixture of Et mycophenolate and 4-methoxybenzyl chloride in DMF containing K2CO3 at room temperature for 40 h gave 90% I [R1 = Et, OR2R3R4 = O-CH2-C6H4-OMe-p]. I [R1 = H, OR2R3R4 = O-CH2-C6H4-OMe-o], also prepared, showed absorption comparable to that of mycophenolic acid; its toxicity to the small intestine as indicated by the activity of alkaline phosphatase was comparable to that of mofetil mycophenolate.

ACCESSION NUMBER: 1997:278841 HCAPLUS
DOCUMENT NUMBER: 126:277343
TITLE: Preparation of mycophenolic acid derivatives as immunosuppressants
INVENTOR(S): Iino, Yukio; Fujita, Koichi; Tsuji, Hisashi; Shiozaki, Makoto; Ishizaki, Sonoko
PATENT ASSIGNEE(S): Ajinomoto KK, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09067358	A2	19970311	JP 1995-226579	19950904
PRIORITY APPLN. INFO.:			JP 1995-226579	19950904

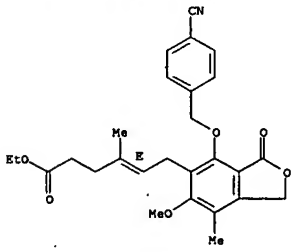
OTHER SOURCE(S): MARPAT 126:277343
IT 188711-39-9P 188711-40-2P 188711-41-3P
188711-42-4P 188711-43-5P 188711-44-6P
188711-45-7P 188711-46-8P 188711-47-9P
188711-48-0P 188711-49-1P 188711-50-4P
188711-51-5P 188711-52-6P 188711-53-7P
188711-54-8P 188711-55-9P 188711-56-0P
188711-57-1P 188711-58-2P 188711-59-3P
188711-60-6P 188711-61-7P 188711-62-8P
188711-63-9P 188711-64-0P 188711-65-1P

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 188711-42-4 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[(4-cyanophenyl)methoxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

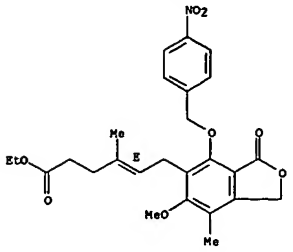
Double bond geometry as shown.



RN 188711-43-5 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-4-[(4-nitrophenyl)methoxy]-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

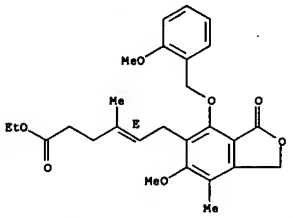
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 188711-44-6 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-4-[(2-methoxyphenyl)methoxy]-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

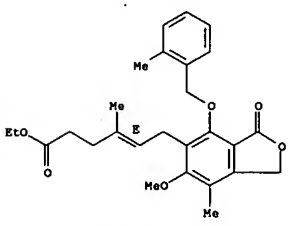
Double bond geometry as shown.



RN 188711-45-7 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-4-[(3-methoxyphenyl)methoxy]-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

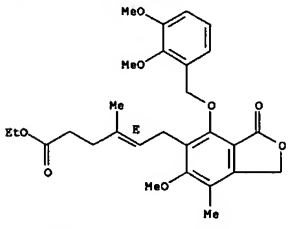
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 188711-48-0 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[(2,3-dimethoxyphenyl)methoxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

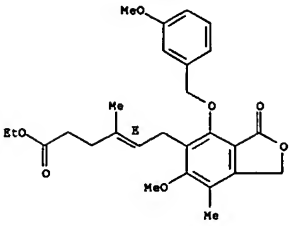
Double bond geometry as shown.



RN 188711-49-1 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[(2,4-dimethoxyphenyl)methoxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

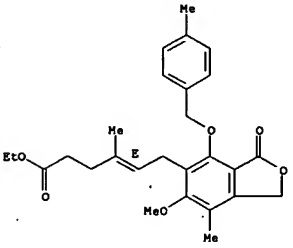
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 188711-46-8 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-4-[(4-methylphenyl)methoxy]-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

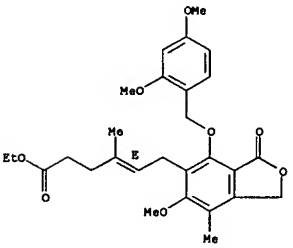
Double bond geometry as shown.



RN 188711-47-9 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-4-[(2-methylphenyl)methoxy]-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

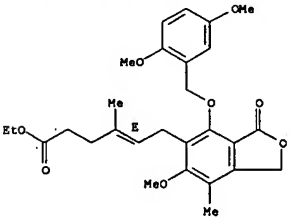
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 188711-50-4 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[(2,5-dimethoxyphenyl)methoxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

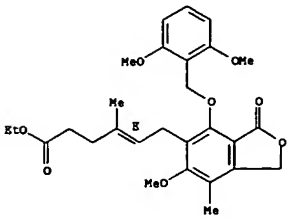
Double bond geometry as shown.



RN 188711-51-5 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[(2,6-dimethoxyphenyl)methoxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

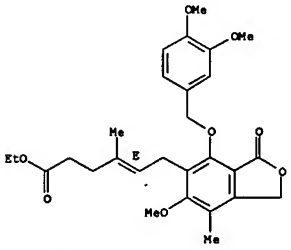
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 188711-52-6 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[(3,4-dimethoxyphenyl)methoxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

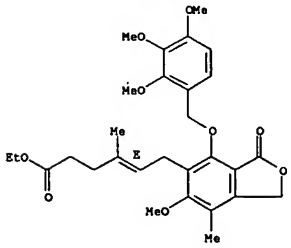
Double bond geometry as shown.



RN 188711-53-7 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[(3,5-dimethoxyphenyl)methoxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

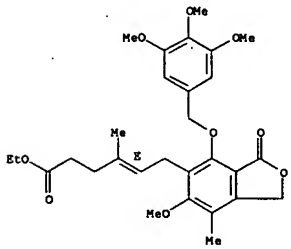
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 188711-56-0 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-[(3,4,5-trimethoxyphenyl)methoxy]-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

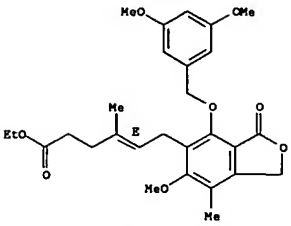
Double bond geometry as shown.



RN 188711-57-1 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-(3-pyridinylmethoxy)-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

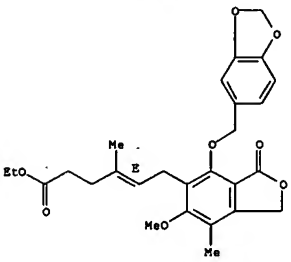
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 188711-54-8 HCAPLUS
CN 4-Hexenoic acid, 6-[4-(1,3-benzodioxol-5-ylmethoxy)-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

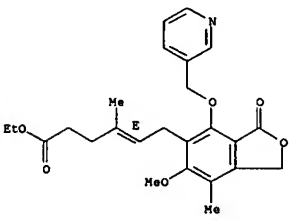
Double bond geometry as shown.



RN 188711-55-9 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-[(2,3,4-trimethoxyphenyl)methoxy]-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

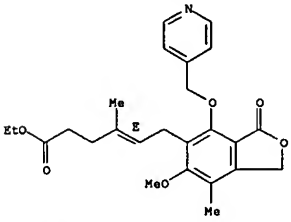
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 188711-58-2 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-(4-pyridinylmethoxy)-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

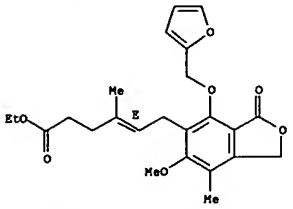
Double bond geometry as shown.



RN 188711-59-3 HCAPLUS
CN 4-Hexenoic acid, 6-[4-(2-furanylmethoxy)-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

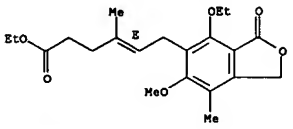
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



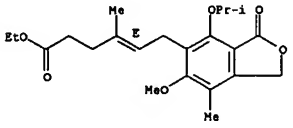
RN 188711-60-6 HCAPLUS
CN 4-Hexenoic acid, 6-(4-ethoxy-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 188711-61-7 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-4-(1-methylethoxy)-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

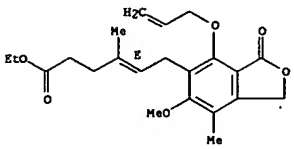
Double bond geometry as shown.



RN 188711-62-8 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-(2-propenyloxy)-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

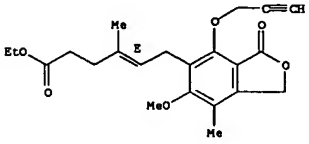
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



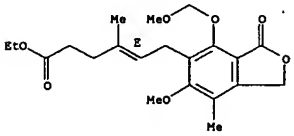
RN 188711-63-9 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-(2-propynyloxy)-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 188711-64-0 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-4-(methoxymethoxy)-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

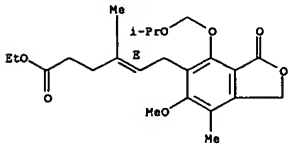
Double bond geometry as shown.



RN 188711-65-1 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-4-[(1-methylethoxy)methoxy]-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

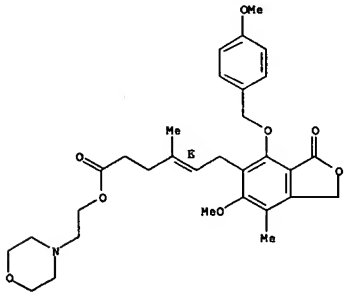
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 188712-01-8 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-4-[(4-methoxyphenyl)methoxy]-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, 2-(4-morpholinyl)ethyl ester, (E)- (9CI) (CA INDEX NAME)

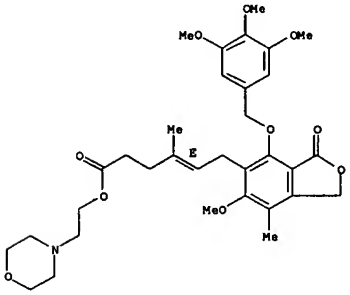
Double bond geometry as shown.



RN 188712-03-0 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-[(3,4,5-trimethoxyphenyl)methoxy]-5-isobenzofuranyl]-4-methyl-, 2-(4-morpholinyl)ethyl ester, (E)- (9CI) (CA INDEX NAME)

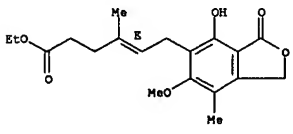
Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



IT 32483-51-5, Ethyl mycophenolate 128794-94-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of mycophenolic acid derivs. as immunosuppressants)
RN 32483-51-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, ethyl ester, (4E)- (9CI) (CA INDEX NAME)

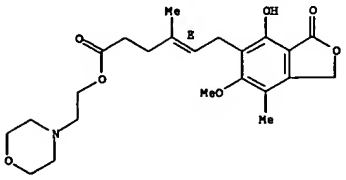
Double bond geometry as shown.



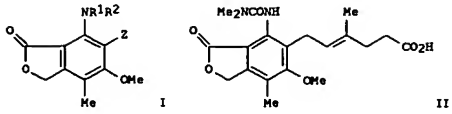
RN 128794-94-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L12 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 22 Dec 1995
GI



AB Mycophenolic acid derivs. I [R1 = H, alkyl; R2 = H, alkyl, acyl, carbamoyl; Z = (un)substituted carboxypentenyl] are therapeutic agents advantageous in the treatment of disease states indicated for mycophenolic acid and/or mycophenolate mofetil and other immunosuppressant agents. Thus, the urea II was obtained from mycophenolic acid in 8 steps. II had an IMP dehydrogenase-inhibiting IC50 of 27.6 μM.

ACCESSION NUMBER: 1995:994343 HCAPLUS
DOCUMENT NUMBER: 124:55683
TITLE: 4-amino derivatives of 5-substituted mycophenolic acid
INVENTOR(S): Artis, Dean R.; Elworthy, Todd R.; Hawley, Ronald C.; Loughhead, David G.; Morgans, David J., Jr.; Nelson, Peter H.; Patterson, John W., Jr.; Sjogren, Eric B.; Smith, David B., et al.
PATENT ASSIGNEE(S): Syntex (U.S.A.) Inc., USA
SOURCE: PCT Int. Appl., 123 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

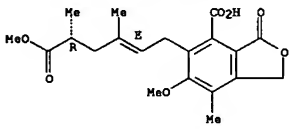
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9522537	A2	19950824	WO 1995-US1786	19950216
WO 9522537	A3	19951026		
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5512568	A	19960430	US 1994-198732	19940218
CA 2183531	AA	19950824	CA 1995-2183531	19950216
AU 9518753	A1	19950904	AU 1995-18753	19950216
ZA 9501293	A	19960816	ZA 1995-1293	19950216
EP 745072	A1	19961204	EP 1995-910983	19950216
EP 745072	B1	19980506		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1141039	A	19970122	CN 1995-191688	19950216
JP 09509173	T2	19970916	JP 1995-521867	19950216

L12 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

BR 9506838	A	19970930	BR 1995-6838	19950216
AT 165826	E	19980515	AT 1995-910983	19950216
ES 2116078	T3	19980701	ES 1995-910983	19950216
IL 112666	A1	20000131	IL 1995-112666	19950216
TW 438788	B	20010607	TW 1995-84101405	19950216
US 5538969	A	19960723	US 1995-452245	19950526
FI 9603220	A	19961016	FI 1996-3220	19960816
LV 12149	B	19981220	LV 1998-157	19980727
PRIORITY APPLN. INFO.:			US 1994-198732 A	19940218
			WO 1995-US1786 W	19950216

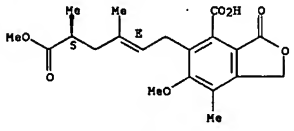
OTHER SOURCE(S): MARPAT 124:55683
IT 171962-50-8 171962-51-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and immunosuppressant activity of 4-aminomycophenolic acids)
RN 171962-50-8 HCAPLUS
CN 4-Isobenzofurancarboxylic acid, 1,3-dihydro-6-methoxy-5-(6-methoxy-3,5-dimethyl-6-oxo-2-hexenyl)-7-methyl-3-oxo-, [R-(E)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



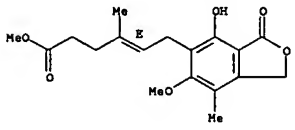
RN 171962-51-9 HCAPLUS
CN 4-Isobenzofurancarboxylic acid, 1,3-dihydro-6-methoxy-5-(6-methoxy-3,5-dimethyl-6-oxo-2-hexenyl)-7-methyl-3-oxo-, [S-(E)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



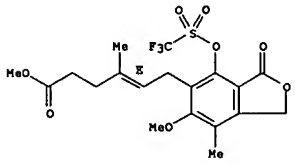
IT 31858-66-9P 162638-64-4P 162638-65-5P
162638-67-7P 162638-68-8P 162638-70-2P
162638-72-4P 162638-74-6P 162638-75-7P
162638-79-1P 171808-45-0P 171808-52-9P
171808-58-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and immunosuppressant activity of 4-aminomycophenolic acids)
RN 31858-66-9 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (4E)- (9CI) (CA INDEX NAME)

L12 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
Double bond geometry as shown.



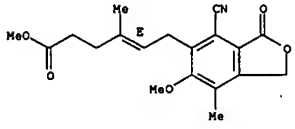
RN 162638-64-4 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-[[(trifluoromethyl)sulfonyl]oxy]-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 162638-65-5 HCAPLUS
CN 4-Hexenoic acid, 6-(4-cyano-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

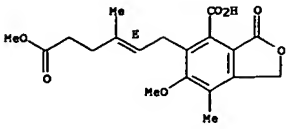
Double bond geometry as shown.



RN 162638-67-7 HCAPLUS
CN 4-Isobenzofurancarboxylic acid, 1,3-dihydro-6-methoxy-5-(6-methoxy-3-methyl-6-oxo-2-hexenyl)-7-methyl-3-oxo-, (E)- (9CI) (CA INDEX NAME)

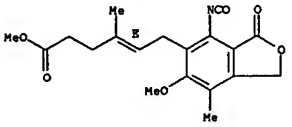
Double bond geometry as shown.

L12 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



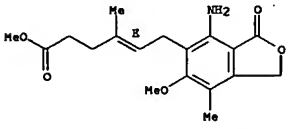
RN 162638-68-8 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-isocyanato-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 162638-70-2 HCAPLUS
CN 4-Hexenoic acid, 6-(4-amino-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

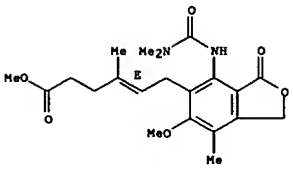
Double bond geometry as shown.



RN 162638-72-4 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[[(dimethylamino)carbonyl]amino]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

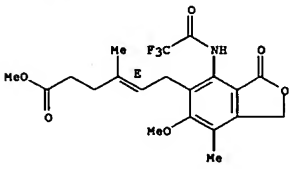
Double bond geometry as shown.

L12 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



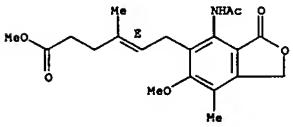
RN 162638-74-6 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-[(trifluoroacetyl)amino]-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



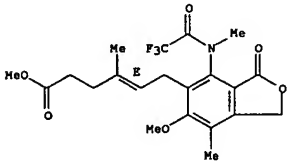
RN 162638-75-7 HCAPLUS
CN 4-Hexenoic acid, 6-[4-(acetylamino)-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



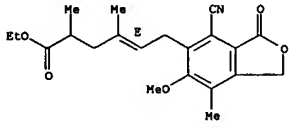
RN 162638-79-1 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-4-[methyl(trifluoroacetyl)amino]-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

L12 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
Double bond geometry as shown.



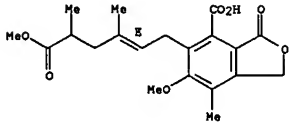
RN 171808-45-0 HCAPLUS
CN 4-Hexenoic acid, 6-(4-cyano-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-2,4-dimethyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 171808-52-9 HCAPLUS
CN 4-Isobenzofurancarboxylic acid, 1,3-dihydro-6-methoxy-5-(6-methoxy-3,5-dimethyl-6-oxo-2-hexenyl)-7-methyl-3-oxo-, (E)- (9CI) (CA INDEX NAME)

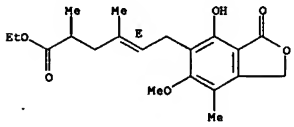
Double bond geometry as shown.



RN 171808-58-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-2,4-dimethyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

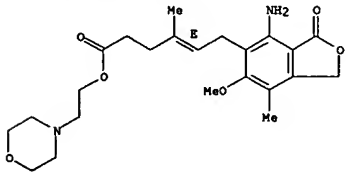
Double bond geometry as shown.

L12 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



IT 162638-71-3P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and immunosuppressant activity of 4-aminomycophenolic acids)
RN 162638-71-3 HCAPLUS
CN 4-Hexenoic acid, 6-(4-amino-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L12 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 22 Dec 1995
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A pharmaceutical composition comprising 5-substituted derivs. I of mycophenolic acid, where R1 = H, COR10, R10 = lower alkyl, aryl or NH-aryl; Z = CH2CH:CZ1CHZ2CZ3Z4COG, ZB, ZC, ZD, ZE, ZF, ZG, or ZH; Z1 = H, lower alkyl, halo, CF3; Z2 = H, OH, lower alkyl, lower alkoxy, aryl, or CHZ13, Z13 = halo, CN, aryl, heteroaryl; Z3 = H, OH, lower alkyl, lower alkenyl, lower alkoxy, halo, Ph, P(O)(OMe)2, P(O)(OH)(OMe), NHZ11, SH, SOmZ12, Z11 = H, alkyl, acyl lower alkyl sulfonyl, Z12 = lower alkyl, m = 0-2; Z4 = H, OH, lower alkyl, halo, Ph, where Z4 is not OH or halo when Z3 = OH, halo, P(O)(OMe)2, P(O)(OH)(OMe), NHZ11, SZ12; Z3Z4 = cycloalkyl of 3-5 carbons; G = OH, lower alkoxy, lower thioalkyl, NG1G2, O(CH2)nNG1G2, O(CH2)nN:G3, n = 1-6, G1,G2 = H, lower alkyl, :G3 = lower alkylene of 4-6 carbons or of 3-5 carbons and one of O, S, NG4, G4 = H, lower alkyl; provided that when Z1 = Me, Z2, Z3 and Z4 are not all H and when R1, Z3, Z4 are all H and Z1 = Me, Z2 is not H or OH; for ZB, Z5 = H or lower alkyl; Z8 = H, lower alkyl or forms double bond with D2; D1D2 form a substituted or unsatd. or unsatd. carbocyclic or heterocyclic ring of 3-7 atoms; for ZC, Z8 = H or lower alkyl; for ZD, D3 = CH2 CH2CH2; for ZE, Z6 = H, lower alkyl, lower alkoxy, COZH, NH2, N3, or halo; Z7 = H, lower alkyl, lower alkoxy, or halo; for ZH, D4 = (CH2)y, O, OCH2, y = 1-3. The disclosed hexenoic acid side-chain derivs. of mycophenolic acid are therapeutic agents advantageous in the treatment of disease states indicated for mycophenolic acid and/or mycophenolate mofetil, including immune, inflammatory, tumor, proliferative, viral or psoriatic disorders.

ACCESSION NUMBER: 1995:994342 HCAPLUS
DOCUMENT NUMBER: 124:86709
TITLE: 5-substituted derivatives of mycophenolic acid
INVENTOR(S): Artis, Dean R.; Elworthy, Todd R.; Hawley, Ronald C.; Loughhead, David G.; Morgans, David J., Jr.; Nelson, Peter H.; Patterson, John W., Jr.; Rohloff, John C.; Sjogren, Eric B.; et al.
PATENT ASSIGNEE(S): Syntex (U.S.A.) Inc., USA
SOURCE: PCT Int. Appl., 142 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9522538	A1	19950824	WO 1995-US1787	19950216
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UG				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5493030	A	19960220	US 1994-198749	19940218
CA 2183530	AA	19950824	CA 1995-2183530	19950216

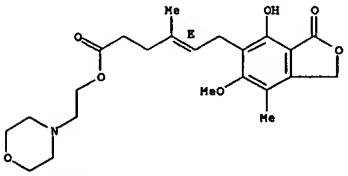
L12 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

AU 9518754	A1	19950904	AU 1995-18754	19950216
ZA 9501299	A	19960816	ZA 1995-1299	19950216
EP 745073	A1	19961204	EP 1995-910984	19950216
EP 745073	B1	20000712		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1141038	A	19970122	CN 1995-191654	19950216
BR 9506819	A	19970909	BR 1995-6819	19950216
JP 09509174	T2	19970916	JP 1995-521868	19950216
IL 112665	A1	19990509	IL 1995-112665	19950216
IL 124139	A1	20000229	IL 1995-124139	19950216
TW 384288	B	20000311	TW 1995-84101398	19950216
AT 194608	E	20000715	AT 1995-910984	19950216
ES 2149971	T3	20001116	ES 1995-910984	19950216
PT 745073	T	20001229	PT 1995-910984	19950216
HR 950070	B1	20010228	HR 1995-950070	19950216
US 5633279	A	19970527	US 1995-483042	19950606
FI 9603218	A	19961011	FI 1996-3218	19960816
GR 3033864	T3	20001031	GR 2000-401101	20000713
PRIORITY APPLN. INFO.:			US 1994-198749	A 19940218
			IL 1995-112665	A3 19950216
			WO 1995-US1787	W 19950216

OTHER SOURCE(S): MARPAT 124:86709

IT 128794-94-5DP, Mycophenolate mofetil, 5-substituted analogs
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 5-substituted derivs. of mycophenolic acid as therapeutic agents for treatment of disease states)
RN 128794-94-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (4E)- (9CI) (CA INDEX NAME)

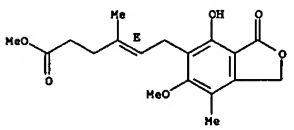
Double bond geometry as shown.



IT 31858-66-9 172151-41-6 172151-44-9
172151-52-9 172151-57-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 5-substituted derivs. of mycophenolic acid as therapeutic agents for treatment of disease states)
RN 31858-66-9 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (4E)- (9CI) (CA INDEX NAME)

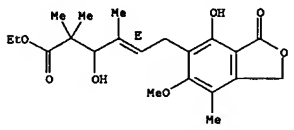
L12 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Double bond geometry as shown.



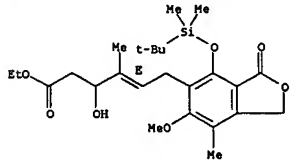
RN 172151-41-6 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-3-hydroxy-2,2,4-trimethyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 172151-44-9 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-3-hydroxy-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

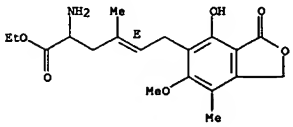
Double bond geometry as shown.



RN 172151-52-9 HCAPLUS
CN 4-Hexenoic acid, 2-amino-6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

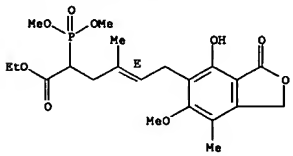
Double bond geometry as shown.

L12 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



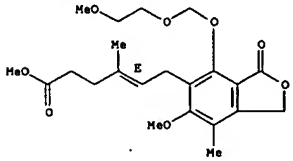
RN 172151-57-4 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-2-(dimethoxyphosphinyl)-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT 125198-47-2P 172151-13-2P 172151-15-4P
172151-16-5P 172151-45-0P 172151-55-2P
172151-68-7P 172152-14-6P 172152-15-7P
172152-16-8P 172152-17-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 5-substituted derivs. of mycophenolic acid as therapeutic agents for treatment of disease states)
RN 125198-47-2 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-4-[(2-methoxyethoxy)methoxy]-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

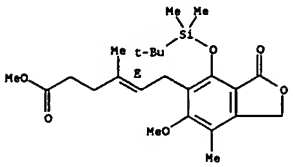
Double bond geometry as shown.



RN 172151-13-2 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1,3-dihydro-

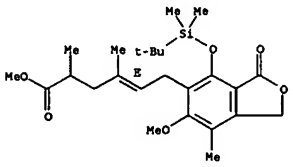
L12 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



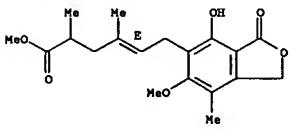
RN 172151-15-4 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-2,4-dimethyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 172151-16-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-2,4-dimethyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

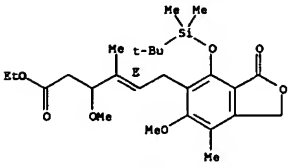
Double bond geometry as shown.



RN 172151-45-0 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-3-methoxy-4-methyl-, ethyl

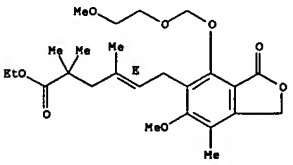
L12 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

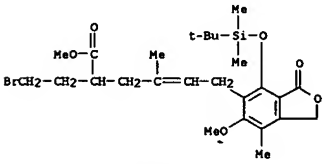


RN 172151-55-2 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-4-[(2-methoxyethoxy)methoxy]-7-methyl-3-oxo-5-isobenzofuranyl]-2,2,4-trimethyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



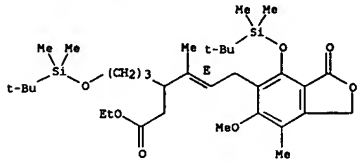
RN 172151-68-7 HCAPLUS
CN 4-Hexenoic acid, 2-(2-bromoethyl)-6-[4-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester (9CI) (CA INDEX NAME)



RN 172152-14-6 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1,3-dihydro-

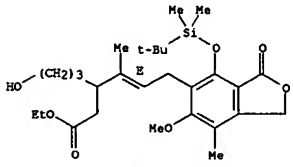
L12 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-3-{3-[[(1,1-dimethylethyl)dimethylsilyl]oxy]propyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



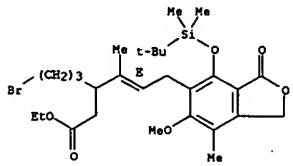
RN 172152-15-7 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-3-(3-hydroxypropyl)-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 172152-16-8 HCAPLUS
CN 4-Hexenoic acid, 3-(3-bromopropyl)-6-[4-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

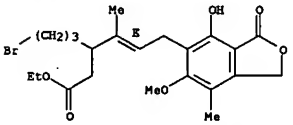
Double bond geometry as shown.



RN 172152-17-9 HCAPLUS
CN 4-Hexenoic acid, 3-(3-bromopropyl)-6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, ethyl ester, (E)- (9CI) (CA

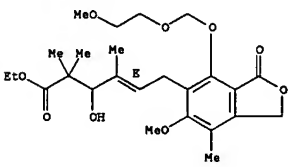
L12 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
INDEX NAME)

Double bond geometry as shown.



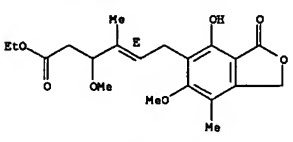
IT 172151-40-5P 172151-43-8P 172151-51-8P
172151-54-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of 5-substituted derivs. of mycophenolic acid as therapeutic agents for treatment of disease states)
RN 172151-40-5 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-4-[(2-methoxyethoxy)methoxy]-7-methyl-3-oxo-5-isobenzofuranyl]-3-hydroxy-2,2,4-trimethyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 172151-43-8 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-3-methoxy-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

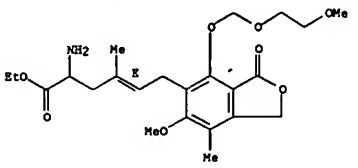
Double bond geometry as shown.



RN 172151-51-8 HCAPLUS
CN 4-Hexenoic acid, 2-amino-6-[1,3-dihydro-6-methoxy-4-[(2-methoxyethoxy)methoxy]-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

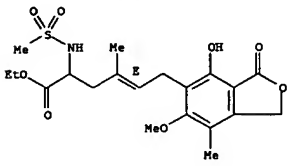
L12 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Double bond geometry as shown.

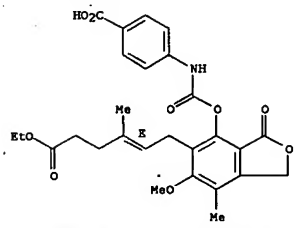


RN 172151-54-1 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-2-[(methylsulfonyl)amino]-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

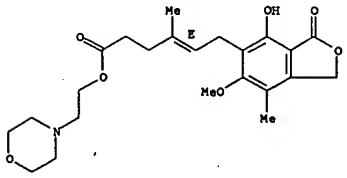


L12 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



IT 128794-94-5, Mycophenolate mofetil
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(zCAM immunosuppressive activity in heart allograft vs. mycophenolate mofetil)
RN 128794-94-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (4E)- (9CI) (CA INDEX NAME)

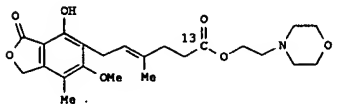
Double bond geometry as shown.



L12 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 08 Aug 1995
AB This is an initial study of the immunosuppressive efficacy of CAM, a derivative of mycophenolic acid, in a rat heart allograft model when the major histocompatibility complex was fully incompatible, and its effect in improving heart allograft survival compared with mycophenolate mofetil (MMF, RS-61443). CAM or MMF was administered orally from day 1 following the allografting for 40 days. The median survival times (MST) were 6 days in rats with no immunosuppressive drug (control group; n=6), 83 days with CAM 10 mg/kg (n=6), and >100 days with both 20 mg/kg (n=7), and 30 mg/kg (n=10). With MMF, in contrast, MST was 9, 17, 35, days with 10, 20, 30 mg/kg/day, resp. All grafts in the CAM 30 mg/kg-treated group survived for more than 100 days after grafting, and, furthermore, CAM was also more effective than MMF in prolongation of the heart graft survival in rats at each dose. Rats with long-surviving cardiac allografts (30 mg/kg; CAM) accepted skin grafts from the donor-strain but rejected them from the third-party strain, suggesting that donor-specific tolerance was induced by CAM. In the tolerant rats, proliferative response against donor type alloantigen was not impaired as compared with naive WKAH rats. In contrast, CML assay showed that T cells obtained from the rats bearing permanently accepted F344 heart grafts had less cytotoxic activity to the donor-type target, and the frequency of CTL precursor against donor-type alloantigen was also reduced.
ACCESSION NUMBER: 1995:724214 HCAPLUS
DOCUMENT NUMBER: 123:187987
TITLE: CAM - a novel immunosuppressive agent
AUTHOR(S): Takazawa, Kenji; Hosoda, Yasuyuki; Bashuda, Hisashi; Yagita, Hideo; Okumura, Ko; Kaneko, Yutaro
CORPORATE SOURCE: School of Medicine, Juntendo University, Tokyo, 113, Japan
SOURCE: Transplantation (1995), 59(12), 1723-7
CODEN: TRPLAU; ISSN: 0041-1337
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 40449-96-5, CAM
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CAM immunosuppressive activity in heart allograft vs. mycophenolate mofetil)
RN 40449-96-5 HCAPLUS
CN Benzoic acid, 4-[[[[5-[(2E)-6-ethoxy-3-methyl-6-oxo-2-hexenyl]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-isobenzofuranyl]oxy]carbonyl]amino]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

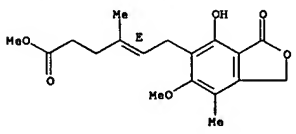
L12 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 13 May 1995
GI



I

AB Synthesis of the potent immunosuppressive agent, mycophenolate mofetil (I) labeled with carbon-14 is described. Methoxyethoxymethyl (MEM) protected mycophenolate norbromide was prepared from unlabeled mycophenolic acid using a modified Hunsdiecker reaction. A three step synthesis furnished the title compound, having a specific activity of 53.8 mCi/mmol, in 49.5% overall yield from K14CN.
ACCESSION NUMBER: 1995:548349 HCAPLUS
DOCUMENT NUMBER: 123:111784
TITLE: Synthesis of mycophenolate mofetil-[14C], RS-61443-14C
AUTHOR(S): Huang, Glenn T.; Parnes, Howard
CORPORATE SOURCE: Institute Organic Chemistry, Syntex Discovery Research, Palo Alto, CA, 94303, USA
SOURCE: Journal of Labelled Compounds & Radiopharmaceuticals (1995), 36(5), 449-56
CODEN: JLCRD4; ISSN: 0362-4803
PUBLISHER: Wiley
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 31858-66-9P 125198-47-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of mycophenolate mofetil-[14C])
RN 31858-66-9 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (4E)- (9CI) (CA INDEX NAME)

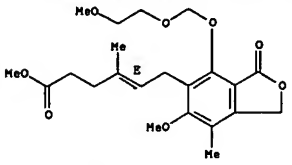
Double bond geometry as shown.



RN 125198-47-2 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-4-[(2-methoxyethoxy)methoxy]-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

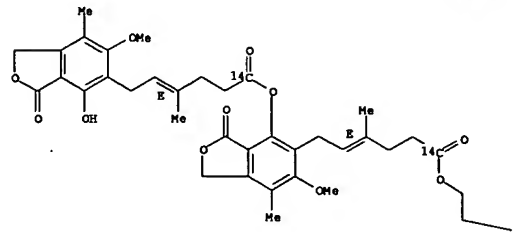
L12 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



IT 165684-44-6P 165684-47-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of mycophenolate mofetil-[14C])
RN 165684-44-6 HCAPLUS
CN 4-Hexenoic-1-14C acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 1,3-dihydro-6-methoxy-7-methyl-5-[3-methyl-6-[2-(4-morpholinyl)ethoxy]-6-oxo-2-hexenyl-6-14C]-3-oxo-4-isobenzofuranyl ester, (E,E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A

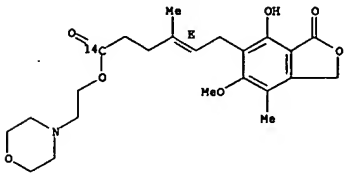


L12 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

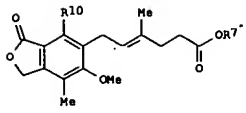
PAGE 1-B

RN 165684-47-9 HCAPLUS
CN 4-Hexenoic-1-14C acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L12 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 15 Feb 1995
GI



I

AB The disclosed derivs. of mycophenolic acid I (R7 = lower alkyl; R10 = OSO2CF3, CN, CO2H, NCO) are therapeutic agents (no data) advantageous in the treatment of disease states indicated for mycophenolic acid and/or mycophenolate mofetil and other immunosuppressant agents. Pharmaceutical formulations were given.

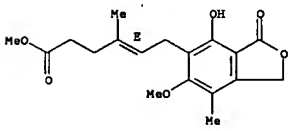
ACCESSION NUMBER: 1995:354681 HCAPLUS
DOCUMENT NUMBER: 122:265175
TITLE: Derivatives of mycophenolic acid
INVENTOR(S): Sjogren, Eric B.
PATENT ASSIGNEE(S): Syntex (U.S.A.) Inc., USA
SOURCE: U.S., 31 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5380879	A	19950110	US 1994-198817	19940218
US 5441953	A	19950815	US 1994-311666	19940923
CA 2183529	AA	19950824	CA 1995-2183529	19950216
WO 9522535	A1	19950824	WO 1995-US1784	19950216
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UG				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9519169	A1	19950904	AU 1995-19169	19950216
ZA 9501292	A	19960816	ZA 1995-1292	19950216
EP 745074	A1	19961204	EP 1995-911697	19950216
EP 745074	B1	20020102		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1143366	A	19970219	CN 1995-191656	19950216
BR 9506820	A	19970909	BR 1995-6820	19950216
JP 09509171	T2	19970916	JP 1995-521865	19950216
IL 112664	A1	19990620	IL 1995-112664	19950216
AT 211467	E	20020115	AT 1995-911697	19950216
PT 745074	T	20020628	PT 1995-911697	19950216
ES 2170141	T3	20020801	ES 1995-911697	19950216
FI 9603219	A	19961011	FI 1996-3219	19960816

PRIORITY APPLN. INFO.: US 1994-198817 A3 19940218
WO 1995-US1784 W 19950216

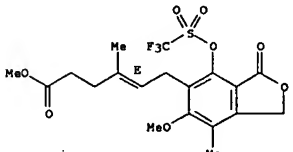
L12 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
OTHER SOURCE(S): MARPAT 122:265175
IT 31858-66-9P 162638-64-4P 162638-65-5P
162638-67-7P 162638-68-8P 162638-82-6P
162638-84-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(mycophenolic acid derivs.)
RN 31858-66-9 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (4E)- (9CI). (CA INDEX NAME)

Double bond geometry as shown.



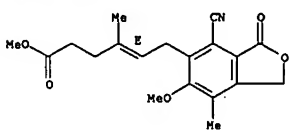
RN 162638-64-4 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-[[(trifluoromethyl)sulfonyl]oxy]-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 162638-65-5 HCAPLUS
CN 4-Hexenoic acid, 6-(4-cyano-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

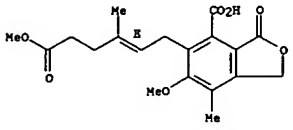
Double bond geometry as shown.



RN 162638-67-7 HCAPLUS

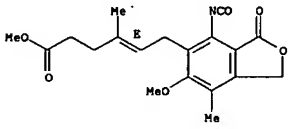
L12 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CN 4-Isobenzofurancarboxylic acid, 1,3-dihydro-6-methoxy-5-(6-methoxy-3-methyl-6-oxo-2-hexenyl)-7-methyl-3-oxo-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



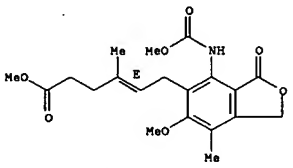
RN 162638-68-8 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-isocyanato-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 162638-82-6 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-4-[(methoxycarbonyl)amino]-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

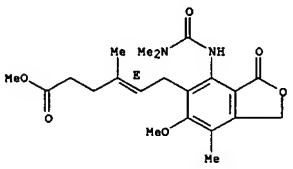
Double bond geometry as shown.



RN 162638-84-8 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-4-[(methylsulfonyl)amino]-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

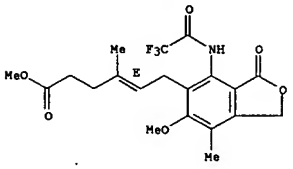
L12 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Double bond geometry as shown.



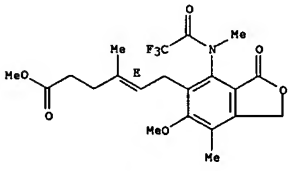
RN 162638-74-6 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-[(trifluoroacetyl)amino]-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 162638-79-1 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-4-[methyl(trifluoroacetyl)amino]-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

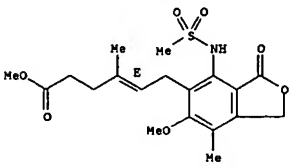
Double bond geometry as shown.



IT **162638-71-3P 162638-75-7P 162638-76-8P**
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(mycophenolic acid derivs.)
RN 162638-71-3 HCAPLUS

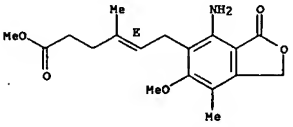
L12 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Double bond geometry as shown.



IT **162638-70-2P 162638-72-4P 162638-74-6P 162638-79-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(mycophenolic acid derivs.)
RN 162638-70-2 HCAPLUS
CN 4-Hexenoic acid, 6-(4-amino-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

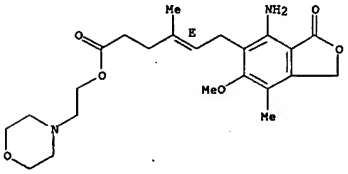


RN 162638-72-4 HCAPLUS
CN 4-Hexenoic acid, 6-[4-[[(dimethylamino)carbonyl]amino]-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

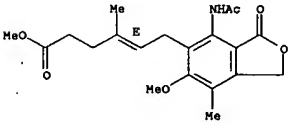
L12 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CN 4-Hexenoic acid, 6-(4-amino-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-morpholinyl)ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



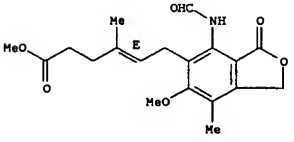
RN 162638-75-7 HCAPLUS
CN 4-Hexenoic acid, 6-[4-(acetylamino)-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 162638-76-8 HCAPLUS
CN 4-Hexenoic acid, 6-[4-(formylamino)-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



Ngrazier 10750466AMEND

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=> d his

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L2             1 S L1
L3            38 S L1 FULL
L4               STRUCTURE UPLOADED
L5            17 S L4
L6           274 S L4 FULL

     FILE 'HCAPLUS' ENTERED AT 16:37:51 ON 01 NOV 2005
L7          1824 S L3
L8            82 S L6
L9           198 S L7 AND (PROCESS OR MAKE OR SYNTH? OR MADE OR MAKING)
L10            5 S L9 AND CATALYST
L11            1 S L7 AND TRANSESTER?
L12            9 S L8 AND L7

=> s l8 and transester?
         20667 TRANSESTER?
L13          2 L8 AND TRANSESTER?

=> d ed abs ibib hitstr 1-2
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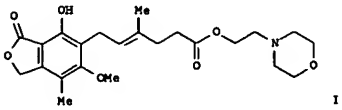
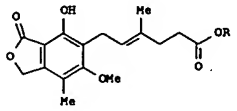
L13 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 27 Aug 2004
GI



I



II

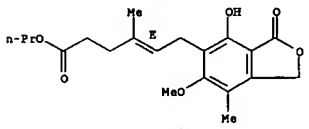
AB A process for making mycophenolate mofetil (I) comprising: conducting a catalytic **transesterification** by reacting a low-carbon alkyl ester of mycophenolic acid (II; R = Me, Et, Pr, Bu) with 2-morpholinoethanol [4-(2-hydroxyethyl)morpholine] to obtain a crude product of mycophenolate mofetil, which is then isolated and purified.

ACCESSION NUMBER: 2004:701805 HCAPLUS
DOCUMENT NUMBER: 141:225522
TITLE: Process for making mycophenolate mofetil by **transesterification**
INVENTOR(S): Lee, Kwang-chung; Lin, Shu-chuan; Chiu, Ray-hwa
PATENT ASSIGNEE(S): Taiwan
SOURCE: U.S. Pat. Appl. Publ., 3 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004167130	A1	20040826	US 2003-750466	20031229
TW 221414	B1	20041001	TW 2003-92103728	20030221

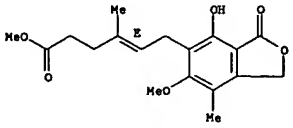
PRIORITY APPLN. INFO.: TW 2003-92103728 A 20030221
OTHER SOURCE(S): CASREACT 141:225522; MARPAT 141:225522
IT **31858-66-9**, Methyl mycophenolate **32483-51-5**, Ethyl mycophenolate **40336-78-5** **745067-13-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for preparation of mycophenolate mofetil by **transesterification** of mycophenolic acid esters with morpholinoethanol)
RN 31858-66-9 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-

L13 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



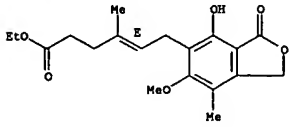
L13 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
isobenzofuranyl)-4-methyl-, methyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



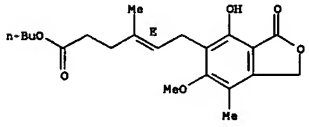
RN 32483-51-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, ethyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 40336-78-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, butyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 745067-13-4 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, propyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L13 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 12 May 1984
GI For diagram(s), see printed CA Issue.
AB Seven mycophenolic acid derivs. I (R = 2,3,4,6-tetra-O-acetyl-β-D-gluco- or galactopyranosyl, β-D-glucopyranosyl, or galactopyranosyl; R1 = OH, OMe, or OEt) were prepared by reaction of I (R = H, R1 = OEt) with RBr in the presence of (Me2CH)2NEt in DMF optionally followed by deacetylation, **transesterification**, and saponification I were used as neoplasm inhibitors.

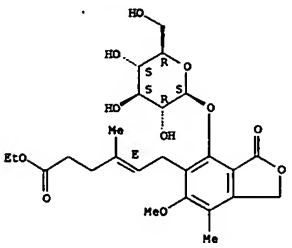
ACCESSION NUMBER: 1975:112225 HCAPLUS
DOCUMENT NUMBER: 82:112225
TITLE: Antitumorous glycosylmycophenolic acid derivatives
INVENTOR(S): Holmes, Richard E.
PATENT ASSIGNEE(S): Eli Lilly and Co.
SOURCE: Ger. Offen., 28 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2424119	A1	19741212	DE 1974-2424119	19740517
US 3903071	A	19750902	US 1973-362700	19730522
ZA 7402417	A	19751126	ZA 1974-2417	19740406
CA 1027558	A1	19780307	CA 1974-197708	19740417
AU 7468027	A1	19751023	AU 1974-68027	19740418
GB 1465008	A	19770216	GB 1974-18583	19740429
CH 603681	A	19780831	CH 1974-6136	19740506
NL 7406542	A	19741126	NL 1974-6542	19740515
BE 815330	A1	19741121	BE 1974-1005977	19740521
FR 2230361	A1	19741220	FR 1974-17688	19740521
ES 426543	A1	19760701	ES 1974-426543	19740521
HU 169191	P	19761028	HU 1974-EI550	19740521
AT 7404212	A	19761115	AT 1974-4212	19740521
AT 337892	B	19770725		
PL 89967	P	19761231	PL 1974-171297	19740521
SU 578006	D	19771025	SU 1974-2026935	19740521
JP 50019747	A2	19750301	JP 1974-58339	19740522
DD 113544	C	19750612	DD 1974-178682	19740522
CS 187435	P	19790131	CS 1974-3663	19740522
RO 68642	P	19800615	RO 1974-78897	19740522
SE 7908625	A	19791017	SE 1979-8625	19791017

PRIORITY APPLN. INFO.: US 1973-362700 A 19730522
IT **55533-50-1P** **55533-51-2P** **55533-53-4P** **55533-54-5P** **55533-55-6P** **55533-56-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and neoplasm inhibition by)
RN 55533-50-1 HCAPLUS
CN 4-Hexenoic acid, 6-[4-(β-D-glucopyranosyloxy)-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

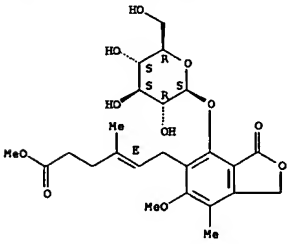
Absolute stereochemistry.
Double bond geometry as shown.

L13 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 55533-51-2 HCAPLUS
CN 4-Hexenoic acid, 6-[4-(β-D-glucopyranosyloxy)-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

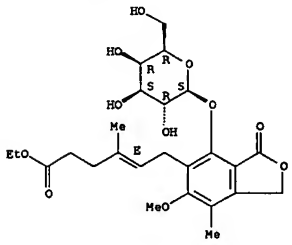
Absolute stereochemistry.
Double bond geometry as shown.



RN 55533-53-4 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)oxy]-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

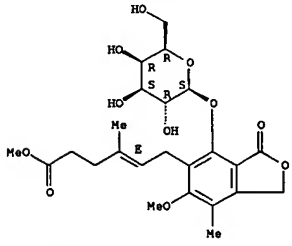
Absolute stereochemistry.
Double bond geometry as shown.

L13 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 55533-56-7 HCAPLUS
CN 4-Hexenoic acid, 6-[4-(β-D-galactopyranosyloxy)-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

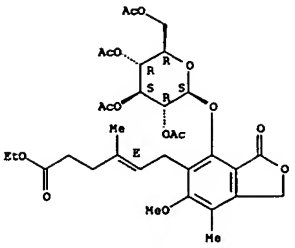
Absolute stereochemistry.
Double bond geometry as shown.



IT 32483-51-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with acetobromogalactose and acetobromoglucose)
RN 32483-51-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, ethyl ester, (4E)- (9CI) (CA INDEX NAME)

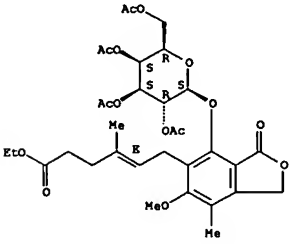
Double bond geometry as shown.

L13 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 55533-54-5 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)oxy]-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

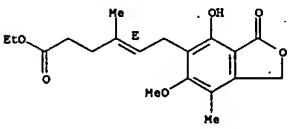
Absolute stereochemistry.
Double bond geometry as shown.



RN 55533-55-6 HCAPLUS
CN 4-Hexenoic acid, 6-[4-(β-D-galactopyranosyloxy)-1,3-dihydro-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

L13 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



Ngrazier 10750466AMEND

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=> d his

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L3              38 S L1 FULL
L4             STRUCTURE UPLOADED
L5              17 S L4
L6             274 S L4 FULL

     FILE 'HCAPLUS' ENTERED AT 16:37:51 ON 01 NOV 2005
L7            1824 S L3
L8              82 S L6
L9             198 S L7 AND (PROCESS OR MAKE OR SYNTH? OR MADE OR MAKING)
L10              5 S L9 AND CATALYST
L11              1 S L7 AND TRANSESTER?
L12              9 S L8 AND L7
L13              2 S L8 AND TRANSESTER?

=> s l8 and catalyst
         704045 CATALYST
L14              3 L8 AND CATALYST

=> d ed abs ibib hitstr 1-3
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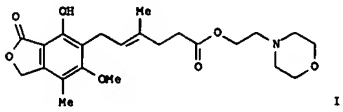
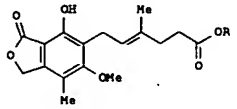
L14 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 27 Aug 2004
GI



I



II

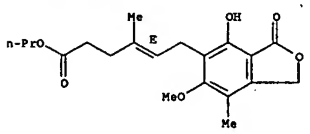
AB A process for making mycophenolate mofetil (I) comprising: conducting a catalytic transesterification by reacting a low-carbon alkyl ester of mycophenolic acid (II; R = Me, Et, Pr, Bu) with 2-morpholinoethanol [4-(2-hydroxyethyl)morpholine] to obtain a crude product of mycophenolate mofetil, which is then isolated and purified.

ACCESSION NUMBER: 2004:701805 HCAPLUS
DOCUMENT NUMBER: 141:225522
TITLE: Process for making mycophenolate mofetil by transesterification
INVENTOR(S): Lee, Kwang-chung; Lin, Shu-chuan; Chiu, Ray-hwa
PATENT ASSIGNEE(S): Taiwan
SOURCE: U.S. Pat. Appl. Publ., 3 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004167130	A1	20040826	US 2003-750466	20031229
TW 221414	B1	20041001	TW 2003-92103728	20030221
PRIORITY APPLN. INFO.:			TW 2003-92103728 A	20030221

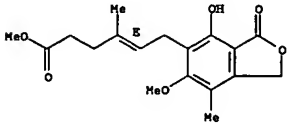
OTHER SOURCE(S): CASREACT 141:225522; MARPAT 141:225522
IT **31858-66-9**, Methyl mycophenolate **32483-51-5**, Ethyl mycophenolate **40336-78-5** **745067-13-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for preparation of mycophenolate mofetil by transesterification of mycophenolic acid esters with morpholinoethanol)
RN 31858-66-9 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (4E)- (9CI) (CA INDEX NAME)

L14 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



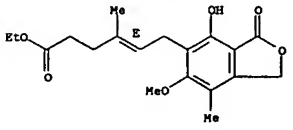
L14 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Double bond geometry as shown.



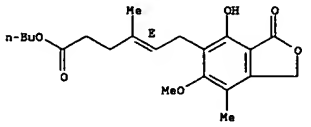
RN 32483-51-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, ethyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 40336-78-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, butyl ester, (4E)- (9CI) (CA INDEX NAME)

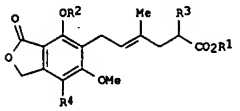
Double bond geometry as shown.



RN 745067-13-4 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, propyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L14 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 28 Aug 2001
GI



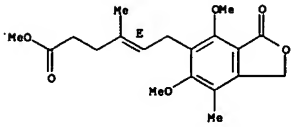
I

AB Syntheses of mycophenolic acid (MPA) I (R1 = R2 = R3 = H, R4 = Me) (II) and its analogs were carried out using palladium-catalyzed Heck carbonylation and olefination. Thus, the reaction of 2-bromo-3,5-dimethoxybenzyl alc. in toluene under carbon monoxide at 180°C in the presence of palladium catalyst using sodium carbonate as a base gave 5,7-dimethoxyphthalide in 88% yield. The phthalide was then converted to 6-iodo-5,7-dimethoxy-4-methylphthalide. Reaction of this aromatic iodide with isoprene and di-Me malonate in the presence of palladium(0) catalyst gave the three component coupling product I (R1 = R2 = Me, R3 = CO2Me, R4 = Me), which was converted into II in three steps. 4-NorMPA I (R1 = R2 = R3 = R4 = H) and 4-homo-MPA I (R 1 = R2 = R3 = H, R4 = Et) were synthesized similarly.

ACCESSION NUMBER: 2001:620584 HCAPLUS
DOCUMENT NUMBER: 135:331285
TITLE: Syntheses of mycophenolic acid and its analogs by palladium methodology
AUTHOR(S): Lee, Youngmin; Fujiwara, Yasunari; Ujita, Katsuji; Nagatomo, Miki; Ohta, Hiroshi; Shimizu, Isao
CORPORATE SOURCE: Department of Applied Chemistry, Waseda University, Tokyo, 169-8555, Japan
SOURCE: Bulletin of the Chemical Society of Japan (2001), 74(8), 1437-1443
CODEN: BCSJA8; ISSN: 0009-2673
PUBLISHER: Chemical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:331285
IT **60435-90-7P** **308272-03-9P** **370573-32-3P** **370573-34-5P** **370573-42-5P** **370573-44-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of mycophenolic acid and analogs via palladium-catalyzed coupling of malonate and isoprene with iodophthalide derivs.)
RN 60435-90-7 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4,6-dimethoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (4E)- (9CI) (CA INDEX NAME)

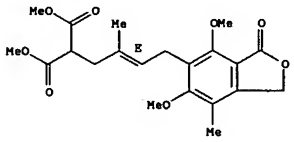
Double bond geometry as shown.

L14 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



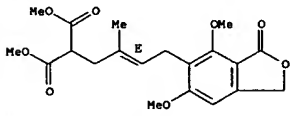
RN 308272-03-9 HCAPLUS
CN Propanedioic acid, [(2E)-4-(1,3-dihydro-4,6-dimethoxy-7-methyl-3-oxo-5-isobenzofuranyl)-2-methyl-2-butenyl]-, dimethyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 370573-32-3 HCAPLUS
CN Propanedioic acid, [(2E)-4-(1,3-dihydro-4,6-dimethoxy-3-oxo-5-isobenzofuranyl)-2-methyl-2-butenyl]-, dimethyl ester (9CI) (CA INDEX NAME)

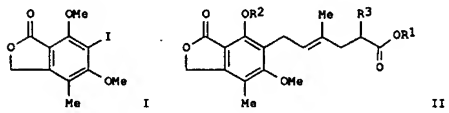
Double bond geometry as shown.



RN 370573-34-5 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4,6-dimethoxy-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

L14 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 05 Oct 2000
GI



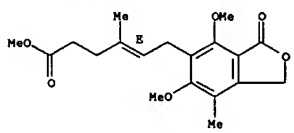
AB Reaction of aromatic iodide (I) with isoprene and di-Me malonate in the presence of palladium(0) catalyst gave the coupling product [II; R1R2 = Me, R3 = CO2Me (III)] which was converted into mycophenolic acid II [R1-R3 = H, (IV)] in three steps.

ACCESSION NUMBER: 2000:700736 HCAPLUS
DOCUMENT NUMBER: 134:4794
TITLE: Synthesis of mycophenolic acid by palladium-catalyzed three component coupling reaction
AUTHOR(S): Shimizu, Isao; Lee, Youngmin; Fujiwara, Yasunari
CORPORATE SOURCE: Department of Applied Chemistry, Waseda University, Tokyo, 169-8555, Japan
SOURCE: Synlett (2000), (9), 1285-1286
CODEN: SYNLES; ISSN: 0936-5214
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:4794

IT **60435-90-7P 308272-03-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of mycophenolic acid by palladium-catalyzed three component coupling reaction)

RN 60435-90-7 HCAPLUS
CN 4-Hexenoic acid, 6-(1,3-dihydro-4,6-dimethoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (4E)- (9CI) (CA INDEX NAME)

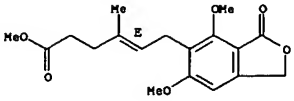
Double bond geometry as shown.



RN 308272-03-9 HCAPLUS
CN Propanedioic acid, [(2E)-4-(1,3-dihydro-4,6-dimethoxy-7-methyl-3-oxo-5-isobenzofuranyl)-2-methyl-2-butenyl]-, dimethyl ester (9CI) (CA INDEX NAME)

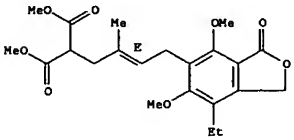
Double bond geometry as shown.

L14 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



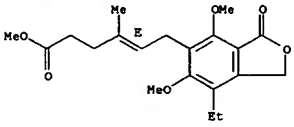
RN 370573-42-5 HCAPLUS
CN Propanedioic acid, [(2E)-4-(7-ethyl-1,3-dihydro-4,6-dimethoxy-3-oxo-5-isobenzofuranyl)-2-methyl-2-butenyl]-, dimethyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



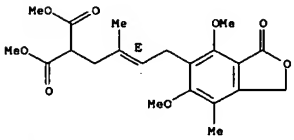
RN 370573-44-7 HCAPLUS
CN 4-Hexenoic acid, 6-(7-ethyl-1,3-dihydro-4,6-dimethoxy-3-oxo-5-isobenzofuranyl)-4-methyl-, methyl ester, (4E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

Ngrazier 10750466AMEND

```
=> s mycophenolate mofetil
          2463 MYCOPHENOLATE
          2147 MOFETIL
L15       2124 MYCOPHENOLATE MOFETIL
                 (MYCOPHENOLATE(W)MOFETIL)

=> s l15 and (process or synth? or make or made or method)
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       2082037 SYNTH?
        218405 MAKE
       1173413 MADE
       2967256 METHOD
L16        347 L15 AND (PROCESS OR SYNTH? OR MAKE OR MADE OR METHOD)

=> s l16 and cataly?
       1278230 CATALY?
L17          9 L16 AND CATALY?

=> s l16 and transester?
         20667 TRANSESTER?
L18          1 L16 AND TRANSESTER?

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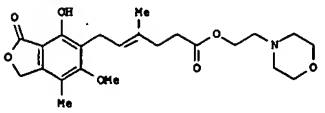
L17 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 27 Aug 2004
GI



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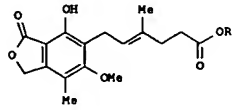

II

AB A process for making **mycophenolate mofetil** (I) comprising: conducting a **catalytic** transesterification by reacting a low-carbon alkyl ester of mycophenolic acid (II; R = Me, Et, Pr, Bu) with 2-morpholinoethanol [4-(2-hydroxyethyl)morpholine] to obtain a crude product of **mycophenolate mofetil**, which is then isolated and purified.

ACCESSION NUMBER: 2004:701805 HCAPLUS
DOCUMENT NUMBER: 141:225522
TITLE: **Process** for making **mycophenolate mofetil** by transesterification
INVENTOR(S): Lee, Kwang-chung; Lin, Shu-chuan; Chiu, Ray-hwa
PATENT ASSIGNEE(S): Taiwan
SOURCE: U.S. Pat. Appl. Publ., 3 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004167130	A1	20040826	US 2003-750466	20031229
TW 221414	B1	20041001	TW 2003-92103728	20030221
PRIORITY APPLN. INFO.:			TW 2003-92103728 A	20030221

OTHER SOURCE(S): CASREACT 141:225522; MARPAT 141:225522

L17 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 23 May 2003
AB The present invention relates to an improved **method** for **synthesis** of **mycophenolate mofetil** by reacting mycophenolic acid with an excess of 2-morpholinoethanol using an enzyme as catalyst in a water-free organic solvent and its subsequent purification The use of an anhydrous organic solvent leads to higher conversion of mycophenolic acid. Water generated in the reaction may also be removed using mol. sieves to further improve conversion of mycophenolic acid to **mycophenolate mofetil**.

ACCESSION NUMBER: 2003:397024 HCAPLUS
DOCUMENT NUMBER: 138:384235
TITLE: Enzymatic preparation of **mycophenolate mofetil**
INVENTOR(S): Patil, Nitin; Mendhe, Rakesh; Khedkar, Anand; Melarkode, Ramakrishnan; Suryanarayan, Shrikumar
PATENT ASSIGNEE(S): Biocon India Limited, India
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003042393	A1	20030522	WO 2001-IN202	20011116

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: WO 2001-IN202 20011116
OTHER SOURCE(S): CASREACT 138:384235
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 06 May 2003
AB A review. Mycophenolic acid (MPA) in its morpholinoester prodrug form, **mycophenolate mofetil** (MMF; CellCept, Roche) is one of the most promising immunosuppressive drugs recently developed. MPA specifically inhibits IMPDH II. This enzyme **catalyzes** the oxidation of inosine monophosphate to xanthine monophosphate, as an intermediate metabolite in the **synthesis** of guanosine monophosphate. Two isoforms of human inosine monophosphate dehydrogenase (IMPDH), designed type I and type II, have been identified and sequenced and are 85% conserved at the amino acid level. Type I is constitutively expressed and is the predominant isoform over type II in normal, nonreplicating cells while type II is selectively upregulated in neoplastic and replicating cells, predominating over type I. As a result of this inhibition of IMPDH, the GTP cellular pool is severely depleted (down to 10% of normal levels). However, MPA has been shown to exhibit serious, but not life-threatening, side effects except in very rare cases. Both hematol. and gastrointestinal (GI) adverse events are associated with the use of MPA and MPA-containing agents such as MMF. These adverse events include anemia, nausea, vomiting, diarrhea, gastritis, and ulcers. It has also been reported that in very rare cases an increased risk of opportunistic pathogens can be a serious, life-threatening effect of being on MPA treatment. It is the GI disturbances that this review will discuss; this area will be explored because very little discussion and research in the literature has been done to assess the mechanisms by which GI toxicity is occurring. Phase III clin. trials have clearly shown that the most common GI complications included ulceration of the GI mucosa, esophagitis, and diarrhea. Severe diarrhea in renal transplant recipients has been reported, but due to the complexity in assessing MPA's involvement, the elucidation of how MPA contributes to gastrotoxicity has been poorly studied. While GI effects of MPA have been reported, little has been done to elucidate MPA role in causing GI toxicity. This review will specifically look at IMPDH isoforms that MPA inhibits and the secondary effects from the inhibition of these isoforms.

ACCESSION NUMBER: 2003:343110 HCAPLUS
DOCUMENT NUMBER: 140:22435
TITLE: A possible mechanism of gastrointestinal toxicity posed by mycophenolic acid
AUTHOR(S): Neerman, Michael F.; Boothe, Dawn M.
CORPORATE SOURCE: Department of Chemistry, Texas A&M University, College Station, TX, 77845, USA
SOURCE: Pharmacological Research (2003), 47(6), 523-526
CODEN: PHMREP; ISSN: 1043-6618
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 16 Aug 2001
AB A review with refs. The activation of inducible form of nitric oxide (NO) **synthase** (iNOS, type II, or macrophage NOS) and subsequent production of free radical gas NO is an important anti-infectious and antitumor mechanism of innate immunity. On the other hand, high amts. of iNOS-derived NO have been implicated in self-tissue destruction during autoimmune diseases, allograft rejection, sepsis, and other disorders accompanied by excessive activation of the immune system. It is generally accepted that beneficial effects of some recently designed immunosuppressive agents primarily stem from their ability to interfere with the function of T and/or B cells, thus preventing deleterious consequences of specific immunity-innate immunity pos. feedback, with high NO production being one of them. However, it has been recently observed that drugs like cyclosporin A, FK506, leflunomide, **mycophenolate mofetil**, pentoxifylline, and linomide can directly modulate cytokine and/or LPS-induced NO production in various cell types in vitro, probably by interfering with iNOS gene transcription or **catalytic** activity of iNOS enzyme. Interestingly, some of these drugs exhibited cell-specific pattern of iNOS modulation, thus indirectly revealing distinct requirements for iNOS induction in different cell types. Possible impact of this direct and cell-selective interference with iNOS activation on the therapeutic effectiveness of immunosuppressive drugs is discussed.

ACCESSION NUMBER: 2001:593949 HCAPLUS
DOCUMENT NUMBER: 135:338628
TITLE: Modulation of inducible nitric oxide **synthase** activation by immunosuppressive drugs
AUTHOR(S): Trajkovic, V.
CORPORATE SOURCE: Institute of Microbiology and Immunology, Medical School, University of Belgrade, Belgrade, 11000, Yugoslavia
SOURCE: Current Drug Metabolism (2001), 2(3), 315-329
CODEN: CDMUBU
PUBLISHER: Bentham Science Publishers Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
REFERENCE COUNT: 128 THERE ARE 128 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 01 Mar 2001
AB A review with 25 refs. **Mycophenolate mofetil** (MMF, CellCept), a semisynthetic derivative of mycophenolic acid (MPA) produced by a fungus, is an inhibitor of the inosine monophosphate dehydrogenase (IMPDH) enzyme (IC50 = 25 nM) that catalyzes the synthesis of guanosine monophosphate (GMP) from inosine. GMP is an essential nucleoside for purine synthesis during cell division. As T and B-lymphocytes almost exclusively use the de novo pathway of purine synthesis, these cells are particularly sensitive to the inhibitory action of MMF. It has a mechanism of action distinct from cyclosporine and tacrolimus. Although MMF does not affect cytokine production, by inhibiting the rate-limiting enzyme IMPDH in the de novo synthesis of purines, it inhibits the proliferation of T and B-lymphocytes, the production of antibodies, and the generation of cytotoxic T lymphocytes. Reversal of acute allograft rejection and increased survival of kidney, heart and bone marrow cell allograft has been shown in several animal studies. Moreover, it was suggested that MMF combined with CsA prevented the acute rejection, and approx. half of the animals became long-term survivors. The Ministry of Health and Welfare approved MMF in 1999 for use for rejection treatment in renal transplantation based on several prospective, randomized and blind efficacy trials.
ACCESSION NUMBER: 2001:149197 HCAPLUS
DOCUMENT NUMBER: 134:172618
TITLE: Pharmacological profiles of **mycophenolate mofetil** (CellCept), a new immunosuppressive agent
AUTHOR(S): Yashima, Yukihiko; Ohgane, Tohru
CORPORATE SOURCE: Nippon Roche Res. Cent., Nippon Roche K. K., 200, Kajiwara, Kamakura city, Kanagawa, 247-8530, Japan
SOURCE: Nippon Yakurigaku Zasshi (2001), 117(2), 131-137
CODEN: NYKZAU; ISSN: 0015-5691
PUBLISHER: Nippon Yakuri Gakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

L17 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 29 Jun 2000
AB A review with .apprx.120 refs. The enzyme IMPDH is a homotetramer of .apprx.55 kDa subunits and consists of a (β/α)8 barrel core domain and a smaller subdomain. The active site has binding pockets for the two substrates IMP and NAD. The enzymic reaction of oxidation of IMP to XMP proceeds through a covalent mechanism involving an active site cysteine residue. This enzyme is a target for immunosuppressive agents because it catalyzes a key step in purine nucleotide biosynthesis which is important for the proliferation of lymphocytes. Several x-ray structures of inhibitors bound to IMPDH have been published. The uncompetitive IMPDH inhibitor MPA is the active metabolite of the immunosuppressive agent **mycophenolate mofetil** (CellCept) which is approved for the prevention of acute rejection after kidney and heart transplantation. The bicyclic ring system of MPA packs underneath the hypoxanthine ring of XMP*, thereby trapping this covalent intermediate of the enzymic reaction. Ribavirin monophosphate, the active metabolite of the antiviral agent ribavirin, is a substrate mimic of IMP. The structure of the two inhibitors 6-Cl-IMP and SAD binding in the IMP and NAD pockets of IMPDH, resp., gives information for the binding mode of the di-nucleotide cofactor to the enzyme. At Vertex Pharmaceuticals a structure-based drug design program for the design of IMPDH inhibitors was initiated. Several new lead compound classes unrelated to other IMPDH inhibitors were found. Integrating structural information into an iterative drug-design process led to the design of VX-497. VX-497 is a potent uncompetitive enzyme inhibitor of IMPDH. The phenyl-oxazole moiety of the mol. packs underneath XMP*, analogous to MPA. VX-497 also makes several new interactions that are not observed in the binding of MPA. VX-497 is a potent immunosuppressive agent in vitro and in vivo. A Phase I clin. trial has been successfully concluded and the compound is currently in Phase II trials in psoriasis and hepatitis C. The rapid progress from initiation of the drug design program to a compound entering clin. trials illustrates the power of structure-based drug design to accelerate the drug discovery process. The structural information on IMPDH has also significantly increased our knowledge about the mechanistic details of this fascinating enzyme.
ACCESSION NUMBER: 2000:436757 HCAPLUS
DOCUMENT NUMBER: 133:187430
TITLE: The structure of inosine 5'-monophosphate dehydrogenase and the design of novel inhibitors
AUTHOR(S): Sintchak, M. D.; Nimmesgern, E.
CORPORATE SOURCE: Vertex Pharmaceuticals, Cambridge, MA, 02139-4242, USA
SOURCE: Immunopharmacology (2000), 47(2-3), 163-184
CODEN: IMMUDP; ISSN: 0162-3109
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
REFERENCE COUNT: 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 16 Jun 2000
AB Methods for the manufacture of mycophenolate are disclosed. **Mycophenolate mofetil** is biochem. **synthesized** using mycophenolic acid and 2-morpholinoethanol with the help of an enzyme. **Mycophenolate mofetil** is also chemical **synthesized** non-**catalytically** by refluxing mycophenolic acid with 2-morpholinoethanol in the absence of a third solvent or a **catalyst**.
ACCESSION NUMBER: 2000:402025 HCAPLUS
DOCUMENT NUMBER: 133:29685
TITLE: Methods of producing esters of mycophenolate
INVENTOR(S): Sircar, Anindya; Khedkar, Anand; Kulkarni, Madhav; Suryanarayan, Shrikumar; Sridharan, Madhavan; Acharaya, Poorpanapranja; Samvasivam, Ganesh
PATENT ASSIGNEE(S): Biocon India Limited, India
SOURCE: PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000034503	A2	20000615	WO 1999-IN70	19991209
WO 2000034503	A3	20000817		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
IN 188985	A	20021130	IN 1998-MA2754	19981209
CA 2354554	AA	20000615	CA 1999-2354554	19991209
EP 1137795	A2	20011004	EP 1999-964770	19991209
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6709846	B1	20040323	US 2001-857579	20010607
PRIORITY APPLN. INFO.:			IN 1998-MA2754 A	19981209
			WO 1999-IN70 W	19991209

OTHER SOURCE(S): CASREACT 133:29685

L17 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 24 Apr 2000
AB **Mycophenolate mofetil** (MMF) is an effective immunosuppressant developed for use in organ transplantation. It specifically targets lymphocyte purine biosynthesis. However, side effects do occur. Understanding how the active metabolite of MMF, mycophenolic acid (MPA) affects the normally integrated interaction between intracellular purine and pyrimidine pathways might aid the development of improved therapeutic regimes. We used a primary human T-lymphocyte model to study how preincubation with MPA (0.1-50 μM) affected normal ribonucleotide pool responses to phytohemagglutinin using radiolabeled precursors. MPA not only restricted the mitogen-induced expansion of GTP pools, but actually induced a severe drop in both GTP (10% of unstimulated cells) and GDP-sugar pools, with a concomitant fall in ATP (up to 50%). These effects were concentration dependent. By contrast, uridine pools expanded whereas CTP pools remained at resting levels. These changes were confirmed by the altered incorporation of [14C]-bicarbonate and [14C]-glycine into nucleotides. Restriction of [14C]-hypoxanthine incorporation and reduction of [14C]-uridine uptake comparable to that of unstimulated cells indicated that MPA also inhibited both salvage routes of nucleotide **synthesis**. MPA affects pyrimidine as well as purine responses to mitogens in T-lymphocytes, but not in an integrated way. The mol. mechanisms underlying these disproportionate changes can best be explained by MPA-related inhibition of amidophosphoribosyltransferase, **catalyzing** the first step in purine biosynthesis. This would increase phosphoribosylpyrophosphate availability, thereby stimulating UTP biosynthesis. Such imbalances, coupled with ATP-depletion, could underlie reported side effects and might be overcome by appropriate combination therapies.
ACCESSION NUMBER: 2000:264361 HCAPLUS
DOCUMENT NUMBER: 133:276031
TITLE: Mycophenolic acid-induced GTP depletion also affects ATP and pyrimidine **synthesis** in mitogen-stimulated primary human T-lymphocytes
AUTHOR(S): Qiu, Ying; Fairbanks, Lynette D.; Ruckemann, Katarzyna; Hawrylowicz, Catherine M.; Richards, David F.; Kirschbaum, Bernhard; Simmonds, H. Anne
CORPORATE SOURCE: Purine Research, Guy's Hospital, London, SE1 9RT, UK
SOURCE: Transplantation (2000), 69(5), 890-897
CODEN: TRPLAU; ISSN: 0041-1337
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 08 Jan 1994
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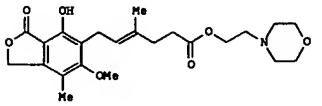

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AB A process for the esterification of mycophenolic acid with 2-morpholinoethanol in an inert organic solvent (e.g., toluene/xylene) capable of azeotropic removal of water gave product, the immunosuppressive drug mycophenolate mofetil (I). Yields were 78-83%. Inclusion of an acid or base catalyst in the reaction gave no increase in either completion or yield, and is thus unnecessary. Addnl. solvents are benzene, mineral spirits, and CH_2Cl_2.

ACCESSION NUMBER: 1994:8601 HCAPLUS
DOCUMENT NUMBER: 120:8601
TITLE: Direct esterification of mycophenolic acid
INVENTOR(S): Knox, Martin; Donegan, Gregory; Smith, Dennis A.
PATENT ASSIGNEE(S): Syntex (U.S.A.), Inc., USA
SOURCE: U.S., 6 pp. Cont.-in-part of U.S. Ser. No. 911,635, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5247083	A	19930921	US 1992-993146	19921218
WO 9401427	A1	19940120	WO 1993-US6390	19930709
W: JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 649422	A1	19950426	EP 1993-917003	19930709
EP 649422	B1	19970319		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08500340	T2	19961116	JP 1994-503484	19930709
JP 3199741	B2	20010820		
AT 150460	E	19970415	AT 1993-917003	19930709
ES 2098763	T3	19970501	ES 1993-917003	19930709

PRIORITY APPLN. INFO.: US 1992-911635 B2 19920710
US 1992-993146 A 19921218
WO 1993-US6390 W 19930709
OTHER SOURCE(S): CASREACT 120:8601

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L2 1 S L1
L3 38 S L1 FULL
L4 STRUCTURE UPLOADED
L5 17 S L4
L6 274 S L4 FULL

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L7 1824 S L3
L8 82 S L6
L9 198 S L7 AND (PROCESS OR MAKE OR SYNTH? OR MADE OR MAKING)
L10 5 S L9 AND CATALYST
L11 1 S L7 AND TRANSESTER?
L12 9 S L8 AND L7
L13 2 S L8 AND TRANSESTER?
L14 3 S L8 AND CATALYST
L15 2124 S MYCOPHENOLATE MOFETIL
L16 347 S L15 AND (PROCESS OR SYNTH? OR MAKE OR MADE OR METHOD)
L17 9 S L16 AND CATALY?
L18 1 S L16 AND TRANSESTER?

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